

GTCGACCCACGCTCCGGGAGCGGGCTAAGAGTCCGACCCGCTCACAACCTGGGAACCGAGAGTAGGGCCGTC	79
GGCTGGCAAGAACC CGCGTCCCTCGGCAAGGCCCATCCGGTGCCACCCCATGTCGCACTAGAGCAGAAGAGGTGA	158
<div style="text-align: center;">M T W L V</div>	
GTCCCTGAAGTCAACCTGCACAGAGCTGCTCTGTACTGTCCCTGGTGGTCCGCCGCC ATG ACC TGG TTG GTG	229
L L G T L L C M L R V G L G T P D S E G	25
CTG CTG GGG ACA CTG CTC TGC ATG ATG CTG CGC GTT GGG TTA GGC ACC CCG GAC TCC GAG GGT	289
F P P R A L H N C P Y K C I C A A D L L	45
TTC CCG CCC CGT GCG CTC CAC AAC TGC CCC TAC AAA TGT ATC TGC GCT GCC GAC CTG CTA	349
S C T G L G L Q D V P A E L P A A T A D	65
AGC TGC ACT GGC CTA GGG CTG CAG GAC GAC GTG CCA GCC GAG TTA CCT GCC GCT ACT GCG GAC	409
L D L S H N A L Q R L R P G W L A P L F	85
CTC GAC CTG AGC CAC AAC GCG CTC CAG CGC CTG CGC CCC GGC TGG TTG GCG CCC CTC TTC	469
Q L R A L H L D H N E L D A L G R G V F	105
CAG CTG CGC GCC CTG CAC CTA GAC CAC AAC GAA CTA GAT GCG CTG GGT CGC GGC GTC TTC	529
V N A S G L R L L D L S S N T L R A L G	125
GTC AAC GCC AGC GGC CTG AGG CTG CTC GAT CTA TCA TCT AAC ACG TTG CCG GCG CTT GGC	589

Fig. 1A

R	H	D	L	D	G	L	G	A	L	E	K	L	L	L	F	N	N	R	L	145
CGC	CAC	GAC	CTC	GAC	GGG	CTG	GGG	GCG	CTG	GAG	AAG	CTG	CTT	CTG	TTC	AAT	AAC	CGC	TTG	649
V	H	L	D	E	H	A	F	H	G	L	R	A	L	S	H	L	Y	L	G	165
GTG	CAC	TTG	GAC	GAG	CAT	GCC	TTC	CAC	GGC	CTG	CGC	GCG	CTC	AGC	CAT	CTC	TAC	CTG	GGC	709
C	N	E	L	A	S	F	S	F	D	H	L	H	G	L	S	A	T	H	L	185
TGC	AAC	GAA	CTC	GCC	TCG	TTC	TCC	TTC	GAC	CAC	CTG	CAC	GGT	CTG	AGC	GCC	ACC	CAC	CTG	769
L	T	L	D	L	S	S	N	R	L	G	H	I	S	V	P	E	L	A	A	205
CTT	ACT	CTG	GAC	CTC	TCC	TCC	AAC	CGG	CTG	GGA	CAC	ATC	TCC	GTA	CCT	GAG	CTG	GCC	GCG	829
L	P	A	F	L	K	N	G	L	Y	L	H	N	N	P	L	P	C	D	C	225
CTG	CCG	GCC	TTC	CTC	AAG	AAC	GGC	CTC	TAC	TTG	CAC	AAC	AAC	CCT	TTG	CCT	TGC	GAC	TGC	889
R	L	Y	H	L	L	Q	R	W	H	Q	R	G	L	S	A	V	R	D	F	245
CGC	CTC	TAC	CAC	CTG	CTA	CAG	CGC	TGG	CAC	CAG	CGG	GGC	CTG	AGC	GCC	GTG	CGC	GAC	TTT	949
A	R	E	Y	V	C	L	A	F	K	V	P	A	S	R	V	R	F	F	Q	265
GCG	CGC	GAG	TAC	GTA	TGC	TTG	GCC	TTC	AAG	GTA	CCC	GCG	TCC	CGC	GTG	CGC	TTC	TTC	CAG	1009
H	S	R	V	F	E	N	C	S	S	A	P	A	L	G	L	K	R	P	E	285
CAC	AGC	CGC	GTC	TTT	GAG	AAC	TGC	TCG	TCG	TCG	CCA	GCT	CTT	GGC	CTA	AAG	CGG	CCG	GAA	1069

Fig. 1B

E	H	L	Y	A	L	V	G	R	S	L	R	L	Y	C	N	T	S	V	P	305
GAG	CAC	CTG	TAC	GCG	CTG	GTG	GGT	CGG	TCC	CTG	AGG	CTT	TAC	TGC	AAC	ACC	AGC	GTC	CCG	1129
A	M	R	I	A	W	V	S	P	Q	Q	E	L	L	R	A	P	G	S	R	325
GCC	ATG	CGC	ATT	GCC	TGG	GTT	TCG	CCG	CAG	CAG	GAG	CTT	CTC	AGG	GCG	CCA	GGA	TCC	CGC	1189
D	G	S	I	A	V	L	A	D	G	S	L	A	I	G	N	V	Q	E	Q	345
GAT	GGC	AGC	ATC	GCG	GTG	CTG	GCC	GAC	GGC	AGC	TTG	GCC	ATA	GGC	AAC	GTA	CAG	GAG	CAG	1249
H	A	G	L	F	V	C	L	A	T	G	P	R	L	H	H	N	Q	T	H	365
CAT	GCG	GGA	CTC	TTC	GTG	TGC	CTG	GCC	ACT	GGG	CCC	CGC	CTG	CAC	CAC	AAC	CAG	ACG	CAC	1309
E	Y	N	V	S	V	H	F	P	R	P	E	P	E	A	F	N	T	G	F	385
GAG	TAC	AAC	GTG	AGC	GTG	CAC	TTT	CCG	CGC	CCA	GAG	CCC	GAG	GCT	TTC	AAC	ACA	GGC	TTC	1369
T	T	L	L	G	C	A	V	G	L	V	L	V	L	L	Y	L	F	A	P	405
ACC	ACA	CTG	CTG	GGC	TGT	GCC	GTG	GGC	CTT	GTG	CTC	GTG	CTG	CTC	TAC	CTG	TTC	GCC	CCA	1429
P	C	R	C	C	R	A	A	C	P	L	P	P	L	A	P	N	T	Q	P	425
CCC	TGC	CGC	TGC	TGC	CGT	GCC	CGT	TGC	CCG	CTG	CCG	CTG	CTG	GCC	CCA	AAC	ACC	CAG	CCC	1489
A	P	R	A	E	P	H	K	S	S	V	L	S	T	T	P	P	D	A	P	445
GCT	CCA	AGA	GCT	GAG	CCG	CAC	AAG	TCC	TCA	GTA	CTC	AGC	ACC	ACA	CCG	CCA	GAC	GCA	CCC	1549

Fig. 1C

S	P	Q	G	Q	A	S	T	S	T	*	
AGC	CCG	CAA	GGC	CAA	CGG	TCC	ACA	AGC	ACG	TAG	456
											1582
TCT	TTCT	GGAG	CC	CAG	CGG	AGG	GGC	CTCA	ATGG	CCCCGCGTGCAGCTGGCAGTAGCTGAGGAATTCGATCTCTACAACC	1661
CTG	GAGG	CCCTGC	CAGCTGA	AGCTGG	CTCTG	AGTCCG	CCAGCTCC	ATAGG	CTCCGAGGGTCCCATGACAAACCTAGACTGC		1740
CAG	GGCT	CCCCC	ACCC	AGGCCCC	ACCCCTCT	TGCTG	CTGCCCCCTG	CTCCCTG	CTTGGTCCAGAGAACTGGCAGATACT		1819
GGT	GGAA	GCACTGT	GCCTGG	CCCCC	CAGCTT	CCTGT	ATGGGCCTCG	AAACACA	CAATGGGCCTTCTCGCTCACTGGTAGA		1898
GAC	AGGG	TTGT	GTCCCC	CAACCT	GCCTT	CTGCT	CTGCCCCCTG	CACAGG	ACCCAAAGGCCCCCTGCAAGGTGTG		1977
CTA	GTTC	CTGCTT	CCCCGCG	ACTT	CCCTAG	TGCCCC	AAATGCCCTGT	GAGGCTG	AGAGACCCAGGCCCTGTGGCTTTCA		2056
AC	ACAG	CACAG	CTGTG	GAAGTGG	CTGT	CTTCT	TACAGCCTGT	GGAAGAAC	CCCCCTGTAGCAGAGCCTCCCATCCACCC		2135
TC	AGGG	CTGAG	GCAGCT	TCGAG	GAGTGG	TGCTCA	AGAGCTG	ACGAGG	GGCCACCTCCCTTCCCAAGGGGTGGGAG		2214
GG	AGTGG	CC	CACAGG	AAAGAG	GGGCTCT	GAA	GGAAGATCT	CGCC	CACACCCAGGACAGAAAGAGGAAACAAGC		2293
CCG	CCCT	CTGTG	AAATGGG	ACTCC	CTCC	ATCC	ACCAAC	CCCAACCT	CTGAAAGCTTCACAACCTTCACGCAGAGTCC		2372
GGT	GCAG	GCAC	CGGAA	AGGCT	CC	TCA	AGAGGTT	CCCTG	GTGCTGGCCTAAGCCCCAGCCAGAGGCCCTGCTC		2451

Fig. 1D

TCTCTGGCCTGGGGCATCCACCCGTTGTTCTGAAGGCAGAGCCCATTTCTGTGGGCTCACAAAGACACAGTGAAGGGGATC 2530
ATGGCCTGCACCCCTGCTTTTCAGCAGTAAAAAGCCCGGAAAGCCTGGCGAGCATGGCCGAGCTGGGAGGGCCGAGCCG 2609
GAACTCCACGTCCCTCGAGAGCAGGAGCCTCTTAAGGGCTGGCACTGGTCTCAGCCCTAATGGCTGAGCGGTACCCCTGG 2688
CTTCATATGCATCTCACTGCTCCCACTGCAGGGGGCAGGGAAGGGGGTCTGGGAGCCCTTCATGTGTGGGGGCCGAG 2767
CTGGGGCCCCCATGGCCATCCTGGACCTCGCTGCTCCAGAGTTAATAAAGGTAGCACATGCTTATTGCTAGAAAAAA 2846
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAGGCGGCCCGC 2895

Fig. 1E

10	20	30	40	50	60	70
H	MTWLVLGTL	LCMLRVGLG	TPDSEGFPP	RALHNC	PYKCIC	AADLLSCTGLGLQDVPAELPAATADL
	SH					
	:	:	:	:	:	:
	:	:	:	:	:	:
	:	:	:	:	:	:
P	MN-LDIHCEQLSDARWTELLP	LLQQYEVVR	LDCCGLTEEHCKDIGS--	ALRANPSLTELCLRTNEL--	GD	
	10	20	30	40	50	60
80	90	100	110	120	130	
H	NALQRLRPGWLAPLFQ	LRAHLHDHNE	LDALGRGVFVNA---	SGLRLDLSSNTLRALGRHDL-	DGLGA-	
	
P	AGVHLVLQGLQSP	TKIQKLSLQNC	SLTEAGCGVLP	SLRSLPTLR	ELHLSDNPLG	DAGLRLLCEGLLDP
	70	80	90	100	110	120
						130
140	150	160	170	180	190	200
H	---LEKLLLFNNRLV	HLD-EHAFHGLRAL	SHLYIGCNE	LASFDFHHLHGLSATHLL	TLDLSSNRLGHISV	
	
P	QCHLEKLQLEYCR	LTAASCEPLASV	LRAAL---	KELTVSNND--	IGEAGARVIGQGLAD----	SA
	140	150	160	170	180	190
210	220	230	240	250	260	
H	PELAALPAFLKN-GLYLHNN	PLPCDCRLYHLL	QRWHQGLSAVRDFAREYVCLAFKVPASRVR---	FFQH		
	
P	CQLETLR--LENCGLTPANCK	DLGIVASQASIREL	DLGNSGLGDAGIAELCPGLLSPASRLKTLWLWEC			
	200	210	220	230	240	250
						260

Fig. 1G

```

270      280      290      300      310      320
H SRVFENCSSA-PALGLKRPEEHLYALVGRSL-----RLYCNTSV-PAMRIAWVSPQOELLRAPGSRDGS I
. . . . . : : : : : : : : : : : : : : : : : : : : : : : :
P DITASGCRDLCRVLQAKETLKL-SLAGNKLGDGARGLLCESLLQPGCQLESILWKSCSLTAACQHVSL
270      280      290      300      310      320      330

330      340      350      360      370      380      390
H AVLADGSLAIGNVQEQHAGLFVCLATGPRLHHNQTHEYNVSVHFPRPEPEAFNTGFTLLGCAVGLVLVL
. . . . . : : : : : : : : : : : : : : : : : : : : : : : :
P MLTQNKHL-----LELQLSSNKLGDSGIQELCQALSQPGTTLRVLCIGDCEVTNSGCSSLAS--LLIANRS
340      350      360      370      380      390

400      410      420      430      440      450
H LYLFAPPCRRACPLPPLAPNTQPAPRAEPHK-SSVLSTTPPDAPSPQGQASTS-----T
: . . . . : : : : : : : : : : : : : : : : : : : : : : : :
P LRELDLSNNCVGDPGVLLQSLGSLQPGCALEQLVLYDTYWTFEEVEDRLQALEGSKPGLRVIS
400      410      420      430      440      450

```

Fig. 1H

cgg ttt ctc ttt aac cac ttg cac ggt ctg ggg tta acc cgc ctg cgg	48
Pro Phe Leu Phe Asn His Leu His Gly Leu Thr Arg Leu Arg	
1 5 10 15	
act ctg gac ctc tcc tcc aac tgg ctg aaa cat atc tcc atc cct gag	96
Thr Leu Asp Leu Ser Ser Ser Asn Trp Leu Lys His Ile Ser Ile Pro Glu	
20 25 30	
ttg gct gca ctg cca act tat ctc aag aac agg ctc tac ctg cac aac	144
Leu Ala Ala Leu Pro Thr Tyr Leu Leu Lys Asn Arg Leu Tyr Leu His Asn	
35 40 45	
aac ccg ctg ccc tgt gac gac tgc agc ctc tac cac ctg ctc cgc cgg tgg	192
Asn Pro Leu Pro Cys Asp Cys Ser Ser Leu Tyr His Leu Leu Arg Arg Trp	
50 55 60	
cac cag cgg ggc ctg agt ggc ctg cat gat ttt gaa cgc gag tac aca	240
His Gln Arg Gly Leu Ser Ala Leu His Asp Phe Glu Arg Glu Tyr Thr	
65 70 75 80	
tgc ttg gtc ttt aag gtg tca gag tcc cga gtg cgc ttt ttg gag cac	288
Cys Leu Val Phe Lys Val Ser Glu Ser Arg Val Arg Phe Phe Glu His	
85 90 95	
agc cgg gtc ttc aag aac tgc tgc gct gca gct cca ggc tta gag	336
Ser Arg Val Phe Lys Asn Cys Ser Val Ala Ala Ala Pro Gly Leu Glu	
100 105 110	

Fig. 11

ctg cct gaa gag cag ctg cac gcg cag gtg ggc cag tcc ctg agg ctc 384
 Leu Pro Glu Glu Gln Gln Ala Gln Val Gly Gln Ser Leu Arg Leu 125
 115 120
 ttc tgc aac acc agt gtg cct gcc act cgg gtg gcc tgg gtc tcc ccg 432
 Phe Cys Asn Thr Ser Val Thr Ala Thr Arg Val Ala Trp Val Ser Pro 140
 130 135
 aag aat gag ctg ctt gtg gcg cca gcc tct cag gat ggt agc atc gct 480
 Lys Asn Glu Leu Leu Val Ala Pro Ala Ser Gln Asp Gly Ser Ile Ala 160
 145 150
 gtg ttg gct gat ggc agc tta gcc ata ggc agg gtg caa gag cag cac 528
 Val Leu Ala Asp Gly Ser Leu Ala Ile Gly Arg Val Gln Glu Gln His 175
 165 170
 gca ggc gtc ttt gtg tgc ctg gcc agt ggg ccc cgc ctg cac cac aac 576
 Ala Gly Val Phe Val Cys Leu Ala Ser Gly Pro Arg Leu His His Asn 190
 180 185
 cag aca ctt gag tac aat gtg agt gtg caa aag gct cgc ccc gag cca 624
 Gln Thr Leu Glu Tyr Asn Val Ser Val Gln Lys Ala Arg Pro Glu Pro 205
 195 200
 gag act ttc aac aca ggc ttt acc acc ctg ctg ggc tgt att gtg ggc 672
 Glu Thr Phe Asn Thr Gly Phe Thr Thr Leu Leu Gly Cys Ile Val Gly 220
 210 215

Fig. 1J

ctg gtg ctg gtg gtg ctg tac ttg ttt gca cca ccc tgt cgt ggc tgc	720
Leu Val Leu Val Leu Leu Tyr Leu Leu Phe Ala Pro Pro Cys Arg Gly Cys	
225 230 235	
tgt cac tgc tgt cag cgg gcc ggc tgc cgc aac cgt tgc tgg ccc cgg gca	768
Cys His Cys Cys Gln Arg Ala Cys Arg Cys Asn Arg Cys Trp Pro Arg Ala	
245 250 255	
tcc agt cca ctc cag gag ctg agc gca cag tcc tcc atg ctt agc act	816
Ser Ser Pro Leu Leu Gln Glu Leu Ser Ala Gln Ser Ser Met Leu Ser Thr	
260 265 270	
acg cca cca gat gca ccc agc cgc aag gcc agt gtc cac aag cat gtg	864
Thr Pro Pro Asp Ala Pro Ser Arg Lys Ala Ser Val His Lys His Val	
275 280 285	
gtc ttc ctg gag ccg ggc aag aag ggc ctc aat ggc cgt gtg cag ctc	912
Val Phe Leu Glu Pro Gly Lys Lys Gly Leu Asn Gly Arg Val Gln Leu	
290 295 300	
gca gta cct cca gac tcc gat ctg tgc aac ccc atg ggc ttg caa ctc	960
Ala Val Pro Pro Asp Ser Asp Leu Cys Asn Pro Met Gly Leu Gln Leu	
305 310 315 320	
aa	962

Fig. 1K

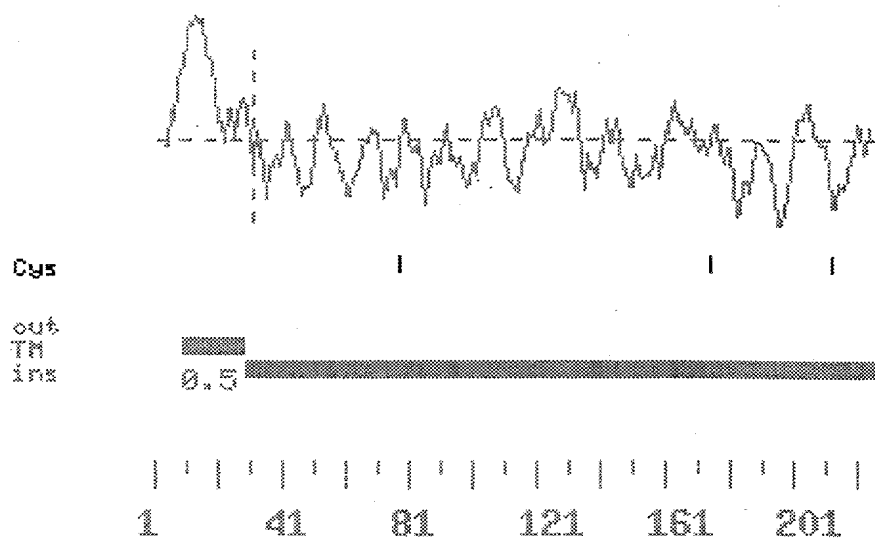


Fig. 1L

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M 1 .....PFLFNHLHGLGLTRLRLTLDLSSNWLKHISI 30
H 151 HAFHGLRALSHLYLGCNELASFSDHLHGLSATHLLTLDLSSNRLGHISV 200

M 31 PELAALPTYLKNRLYLHNNPLPCDCSLYHLLRRWHQGLSALHDFEREYT 80
H 201 PELAALPAFLKNGLYLHNNPLPCDCRLYHLLQWRWHQGLSAVRDFAREYV 250

M 81 CLVFKVSESRVFFEHRSRVFKNCVSAAAPGLELPEEQHQAQVQOSLRLLFC 130
H 251 CLAFKVPASRVRFQHSRVFENCSSAPALGLKRPEEHLYALVGRSLRLYC 300

M 131 NTSVPATRVAVWSPKNELLVAPASQDGSIAVLADGSLAIGRVQEQHAGVF 180
H 301 NTSVPAMRIAWVSPQQLRAPGSRDGSIAVLADGSLAIGNVQEQHAGLF 350

M 181 VCLASGPRLHNNQTL EYNVSVQKARPEPETFTTLLGCIVGLVLVLL 230
H 351 VCLATGPRLHNNQTHEYNVSVHFPRPEPEAFNTGFTTLLGCAVGLVLVLL 400

M 231 YLFAPPCRGCHCCQACRNRCWPRASSPLQELSA.QSSMLSTTPPDAPS 279
H 401 YLFAPPCR....CCRRACPLPPLAPNTQAPAPRAEPHKSSVLSTTPPDAPS 446

M 280 RKASVHKHVVFLEPGKKGLNGRVQLAVPPDSDL CNP MGLQL 320
H 447 PQGQASTST..... 455

```

Fig. 1M

GTCGACCCACGCGTCCGGCGA	ATG	GCC	TGG	ACC	AAG	TAC	CAG	CTG	TTC	CTG	10
											69
A	G	L	M	L	V	T	G	S	I	N	30
GCC	GGG	CTC	ATG	CTT	GTT	ACC	GGC	TCC	ATC	AAC	129
F	M	A	E	G	C	G	G	S	K	E	50
TTC	ATG	GCC	GAG	GGC	TGT	GGA	GGG	AGC	AAG	GAG	189
A	V	G	M	F	L	G	E	F	S	C	70
GCA	GTG	GGC	ATG	TTC	CTG	GGA	GAA	TTC	TCC	TGC	249
R	A	A	G	Q	S	D	S	S	V	D	90
AGA	GCT	GCA	GGG	CAA	TCA	GAC	TCC	AGC	GTA	GAC	309
F	L	P	P	A	L	C	D	M	T	G	110
TTC	CTG	CCC	CCA	GCG	CTC	TGT	GAC	ATG	ACA	GGG	369
M	T	S	A	S	S	F	Q	M	L	R	130
ATG	ACC	AGT	GCC	TCC	AGC	TTC	CAG	ATG	CTG	CGG	429
F	S	V	A	F	L	G	R	R	L	V	150
TTC	TCG	GTG	GCC	TTC	CTG	GGC	CGG	AGG	CTG	GTG	489

Fig. 2A

T	I	A	G	L	V	V	G	L	A	D	L	L	S	K	H	D	S	Q	170	
ACC	ATC	GCG	GGG	CTG	GTG	GTC	GTG	GGC	CTG	GCT	GAC	CTC	CTG	AGC	AAG	CAC	GAC	AGT	CAG	549
H	K	L	S	E	V	I	T	G	D	L	L	I	I	M	A	Q	I	I	V	190
CAC	AAG	CTC	AGC	GAA	GTG	ATC	ACA	GGG	GAC	CTG	TTG	ATC	ATC	ATG	GCC	CAG	ATC	ATC	GTT	609
A	I	Q	M	V	L	E	E	K	F	V	Y	K	H	N	V	H	P	L	R	210
GCC	ATC	CAG	ATG	GTG	CTA	GAG	GAG	AAG	TTC	GTC	TAC	AAA	CAC	AAT	GTG	CAC	CCA	CTG	CGG	669
A	V	G	T	E	G	L	F	G	F	V	I	L	S	L	L	L	V	P	M	230
GCA	GTT	GGC	ACT	GAG	GGC	CTC	TTT	GGC	TTT	GTG	ATC	CTC	TCC	CTG	CTG	CTG	GTG	CCC	ATG	729
Y	Y	I	P	A	G	S	F	S	G	N	P	R	G	T	L	E	D	A	L	250
TAC	TAC	ATC	CCC	GCC	GGC	TCC	TTC	AGC	GGA	AAC	CCT	CGT	GGG	ACA	CTG	GAG	GAT	GCA	TTG	789
D	A	F	C	Q	V	G	Q	Q	P	L	I	A	V	A	L	L	G	N	I	270
GAC	GCC	TTC	TGC	CAG	GTG	GGC	CAG	CAG	CCG	CTC	ATT	GCC	GTG	GCA	CTG	CTG	GGC	AAC	ATC	849
S	S	I	A	F	F	N	F	A	G	I	S	V	T	K	E	L	S	A	T	290
AGC	AGC	ATT	GCC	TTC	TTC	AAC	TTC	GCA	GGC	ATC	AGC	GTC	ACC	AAG	GAA	CTG	AGC	GCC	ACC	909
T	R	M	V	L	D	S	L	R	T	V	V	I	W	A	L	S	L	A	L	310
ACC	CGC	ATG	GTG	TTG	GAC	AGC	TTG	CGC	ACC	GTT	GTC	ATC	TGG	GCA	CTG	AGC	CTG	GCA	CTG	969

Fig. 2B

G W E A F H A L Q I L G F L I L L I G T 330
GGC TGG GAG GCC TTC CAT GCA CTG CAG ATC CTT GGC TTC CTC ATA CTC CTT ATA GGC ACT 1029

A L Y N G L H R P L L G R L S R G R P L 350
GCC CTC TAC AAT GGG CTA CAC CGT CCG CTG CTG GGC CGC CTG TCC AGG GGC CGG CCC CTG 1089

A E E S E Q E R L L G G T R T P I N D A 370
GCA GAG GAG AGC GAG CAG GAG AGA CTG CTG GGT GGC ACC CGC ACT CCC ATC AAT GAT GCC 1149

S * 372
AGC TGA 1155

GGTTCCCTGGAGGCTTCTACTGCCACCCGGGTGCTCCTTCTCCCTGAGACTGAGGCCACACAGGCTGGTGGCCCCGAA 1234

TGCCCCATCCCCAAGGCCCTCACCCCTGTCCCCCTCCCTGCAGAACCCCCAGGGCAGCTGCTGCCACAGAGATAACAACAC 1313

CCAAGTCCTCTTTTCTCACTACCACCTGCAGGGTGGTGTACCCAGCCCCCACAAAGCCTGAGTGCAGTGGCAGACCTC 1392

AGCTCTCTGGACCCCTCCTACAGCACTAGAGCTAAATCATGAAGTTGAATTGTAGGAATTTACCACCGTAGTGTATCTG 1471

AATCATAAACTAGATTATCATATAAAAAAAAAAAAAAAAAAGGGCGGCCGC 1518

Fig. 2C

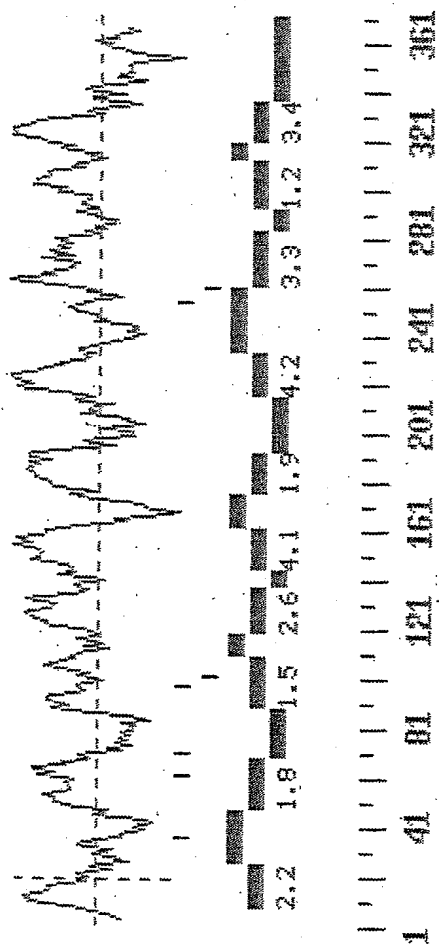


Fig. 2D

Cos
Maly
out
TH
Ans

	M	A	P	H	W	
GTCGACCCACGCGTCCGGGACAGCTGGCCTGAAGCTCAGAGCCGGGCGTGGCC	ATG	GCC	CCA	CAC	TGG	5
						72
A V W L L A A R L W G L G I G A E V W W						25
GCT GTC TGG CTG CTG GCA AGG CTG TGG GGC CTG GGC ATT GGG GCT GAG GTG TGG TGG						132
N L V P R K T V S S G E L A T V V R R F						45
AAC CTT GTG CCG CGT AAG ACA GTG TCT TCT GGG GAG CTG GCC ACG GTA GTA CGG CGG TTC						192
S Q T G I Q D F L T L T L T E P T G L L						65
TCC CAG ACC GGC ATC CAG GAC TTC CTG ACA CTG ACG CTG ACG GAG CCC ACT GGG CTT CTG						252
Y V G A R E A L F A F S M E A L E L Q G						85
TAC GTG GGC GCC CGA GAG GCC CTG TTT GCC TTC AGC ATG GAG GCC CTG GAG CTG CAA GGA						312
A I S W E A P V E K K T E C I Q K G K N						105
GCG ATC TCC TGG GAG GCC CCC GTG GAG AAG AAG ACT GAG TGT ATC CAG AAA GGG AAG AAC						372
N Q T E C F N F I R F L Q Q P Y N A S H L						125
AAC CAG ACC GAG TGC TTC AAC TTC ATC CGC TTC CTG CAG CCC TAC AAT GCC TCC CAC CTG						432
Y V C G T Y A F Q P K C T Y V V S A A L						145
TAC GTC TGT GGC ACC TAC GCC TTC CAG CCC AAG TGC ACC TAC GTC GTG AGT GCT GCC CTC						492

Fig. 3A

L P R C P Q P P A L L T L L W T R G C G 165
 CTA CCT CGG TGT CCC CAG CCC CCC GGC CTC CTC ACC CTT CTC TGG ACT CGT GGA TGT GGC 552

 P Q S P A L K H L L I T S L S V L R T C 185
 CCA CAG AGC CCT GCC CTT AAG CAT CTC ATC ACC TCT CTC TCT GTC CTT AGA ACA TGC 612

 S P S L W S M E S L K M G R A S V P M T 205
 TCA CCT TCA CTT TGG AGC ATG GAG AGT TTG AAG ATG GGA AGG GCA AGT GTC CCT ATG ACC 672

 Q L R A M L A F L W M V S C T R P H S T 225
 CAG CTA AGG GCC ATG CTG GCC TTC TTG TGG ATG GTG AGC TGT ACT CGG CCA CAC TCA ACA 732

 T S W A R N P L S C V T W G P T P * 244
 ACT TCC TGG GCA CGG AAC CCA TTA TCC TGC GTA ACA TGG GGC CCC ACC ACT CCA TGA 789

 AGACAGAGTACCTGGCCCTTTTGGCTCAACGAACCTCACTTTGTAGGCTCTGCCTATGTACCTGAGAGTGTGGCAGCTT 868

 CACGGGGACGACGACAAGGTCTACTTCTTTCAGGGAGCGGGCAGTGGAGTCCGACTGCTATGCCGAGCAGGTGGTG 947

 GCTCGTGTGGCCCGTGTCTGCAAGGGCGATATGGGGGGCGCACGGACCCCTGCAGAGGAAGTGGACCACGTTCCCTGAAGG 1026

 CGCGGCTGGCATGCTCTGCCCCGAACTGGCAGCTCTACTTCAACCAGCTGCAGGGCGATGCACACCCCTGCAGGACACCTC 1105

Fig. 3B

CTGGCAACACCACCTTCTTTGGGGTTTTTAAGCACAGTGGGTGACATGTACCTGTGCGCCATCTGTGAGTACCAG 1184
 TTGGAAGAGATCCAGCGGGTGTGTGAGGGCCCCCTATAAGGAGTACCATGAGGAAGCCCAGAGTGGGACCGCTACACTG 1263
 ACCCTGTACCCAGGCCCTGGTTGTGATGGCTGCCAGCCCCGCCATGCCGGGGCTACCACCTGCTTTTCAGAGGAGCAG 1342
 GGGGCGGGCTGGCTGCTGAAGCTACCTTGTGGCTGTCGTGGCAGGCCCGTCGGTGACCTTGAGGGCCCCGGCCCCC 1421
 TGGAAAACCTGGGGCTGGTGTGGCTGGCGGTGGTGGCCCTGGGGGCTGTGTGCCCTGGTGTGCTGCTGGTGTCTGTC 1500
 ATTGCGCCGGGGCTGCGGGGAAGAGCTGGAGAAAGGGCCCAAGGCTACTGAGAGGACCTTGGTGTACCCCCCTGGAGCTG 1579
 CCCAAGGAGCCCCACCAGTCCCCCCTTCCGGCCCTGTCCCTGAACCAGATGAGAAACTTTGGGATCCTGTGCGTTACTACT 1658
 ATTCAATGGCTCCCTTAAGATAGTACCTGGGCATGCCCCGGTGCCAGCCCCGGTGGGGGGCCCCCTTCGCCACCTCCAGG 1737
 CATCCCAGGCCAGCCCTCTGCCCTTCTCCAACCTCGGCTTCACTGGGGGGTGGCGGGAACCTCAAATGCCAATGTTACGTG 1816
 CGCTTACAACCTAGGAGGGGAGGACCGGGGAGGGCTCGGGCACCCCCCTGCCCTGAGCTCGCGGATGAACCTGAGACGCAAAC 1895
 TGCAGCAACGCCAGCCACTGCCCGACTCCAAACCCCGAGGAGTCATCAGTATGAGGGGAACCCCCACCCGCTCGGCGGGA 1974
 AGCGTGGGAGGTAGTCTCCTACTTTTGACACAGGCACCAGCTACCTCAGGGACATGGCACGGGCACCTGCTCTGTCTGG 2053

Fig. 3C

GACAGATACTGCCACGACCCACCGGCATGAGGACCTGCTCTGCTCAGCACGGCAGCTGCCACTTGGTGTGGCTCAC 2132

CAGGGCACCGCCTCGCAGAAGGCATCTTCCTCCTCTCTGTGAATCACAGACACGCGGACCCAGCCGCAAAACTTT 2211

TCAAGGCAGAAAGTTTCAAGATGTGTGTTTGTCTGTATTTGCACATGTGTTTGTGTGTGTATGTGTGTGCACGC 2290

GCGTGGCGGCTTGTGGCATAGCCTTCCTGTCTTCTGTCAAGTCTCCCTTGGCCTGGGTCCCTGGTGAGTCATTGGAG 2369

CTATGAAGGGGAAGGGTCGTATCACTTTGTCTCTCCTACCCCCACTGCCCCGAGTGTGCGGCAGCGATGTACATATGG 2448

AGGTGGGGTGGACAGGGTGTGTGCCCCCTTCAGAGGGAGTGCAGGGCTTGGGGTGGCCCTAGTCCCTGCTCCTAGGGCTG 2527

TGAATGTTTTACAGGTGGGGGAGGAGATGGAGCCTCCTGTGTGTTTGGGGGAAGGGTGGGTGGGGCCCTCCCACTTG 2606

GCCCCGGGGTTCAGTGGTATTTTATACTTGCCCTTCTTCCTGTACAGGGCTGGGAAAAGGCTGTGTGAGGGGAGAGAAGGG 2685

AGAGGGTGGGCCCTGCTGTGGACAAATGGCATACTCTCTCCAGCCCTAGGAGGGGCTCCCTAACAGTGTAACCTATTGT 2764

GTCCCCCGGTATTTATTTGTGTGTAATAATTTGAGATTTTATATATGA 2811

Fig. 3D

Fig. 3F

```

360      370      380      390      400      410      420
M QAQWARYTDPVSPRPGSCINNWHRDNGYTSSLELPDNTLNFIKKHPLMEDQVKPRLGRPLLVKKNTNF
H  ---WTR---GCGPQ---SPAL---KH---LLI---TSL
160      170

430      440      450      460      470      480      490
M THVVADRVPGLDGATYTVLFIGTGDGWLKAVSLGPWIHMVVEELQVFDQEPVESLVLQSQKKVLFAGRSR
H S-----VLRTCSPSLW-----SMESLKMGRA-----SVPMT
180      190      200

500      510      520      530      540      550      560
M QLVQLSLADCTKYRFCVDCVLARDPYCAWNVNTSRCVATTSGRSGFLVQHVANLDTSKMCNQYGIKKVR
H QLRAM-LA---F---L---WMVSCTRPHSTTS-----
210      220

570      580      590      600      610      620      630
M SIPKNITVVSGETDLVLPCHLSSNLAAHWTFFGSQDLPAEQPGSFLYDTGLQALVVMAAQSRHSGPYRCYS
H -----W-----

640      650      660      670      680      690      700
M EEQTRIAAESYLVAUVAGSSVTLEARAPLENGLVWLAVVALGAVCLVLLLVLRLRRRLREELEKGA
H -----ARNPLS-----CVT-----
230

```

Fig. 3G

240

830

Fig. 3H

M ATTCTGGCCTTTTATATGTGGGGCCCGAGAGCGCTGTTTGCCCTTCAGTGTAGAGGCTCTGGAGCTGCA

 H CCACTGGGCTTCTGTACGTGGGGCCCGAGAGGCCCTGTTTGCCCTTCAGCATGGAGGCCCTGGAGCTGCA

Fig. 31

```

360      370      380      390      400      410      420
M  AGGAGCGATCTCTTGGAGGCTCCAGCTGAGAAAGAAATTGAATGTACCCAGAAAGGAAAGAGCAACCAG
      ::::::::::: :: ::::::::::: ::::::::::: ::::::::::: ::::::::::: :::::::::::
H  AGGAGCGATCTCTTGGAGGCCCGTGGAGAAAGAACTGAGTGTATCCAGAAAGGAAAGAAACAACCAG
310      320      330      340      350      360      370
      430      440      450      460      470      480      490
M  ACCGAATGCTTCAACTTCATCCGCTTCCTTCAGCCATACAATTCTCCATCTGTATGCTGCGGCACCT
      ::::::::::: ::::::::::: ::::::::::: ::::::::::: ::::::::::: :::::::::::
H  ACCGAGTGCTTCAACTTCATCCGCTTCCTGCAGCCCTACAATGCCCTCCACCTGTACGTCTGTGGCACCT
380      390      400      410      420      430      440
      500      510      520      530      540      550      560
M  ATGCCCTTCCAGCCCCAAGTGCACCTACATCAACATGCTCACGTTCAACCTTGGACCGTGCAGAAATTGAGGA
      : ::::::::::: ::::::::::: ::::::::::: :::::::::::
H  ACGCCTTCCAGCCCCAAGTGCACCTACGTG-----TGA---GTGC-----
450      460      470      480      490      500      510      520      530
      570      580      590      600      610      620      630
M  TGGGAAGGTAATGCCCATATGACCCAGCTAAGGTCACACCCGACTCCTTGTGGACGGTGAGCTGTAC
      ::::::::::: :: :: :: :: :: :: :: :: :: :: :: :: ::
H  -----TGCCCT-----CCTACCTCGGTGTC-C-CGACCCCC-----CG-----C
      490      500      510
      640      650      660      670      680      690      700
M  TCAGCCACACTCAATAACTTCTTGGCACAGAGCCGGTTATCCTTCGATACATGGGACCCACCACCTCCA
      :: :: :: :: :: :: :: :: :: :: :: :: ::
H  CCT-CCTCACCC---TTCT--CTGGACTCGTGG-----ATGTGG-CCAC-----
520      530      540      550

```

Fig. 3J

```

710      720      730      740      750      760      770
M TCAAGACAGATACCTGGCTTTTGGCTGAATGAACCCCACTTTGTAGCTCTGCCTTTGTCCCTGAGAG
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
H -----AGAGCCCTGCCCCTTAAGC-----ATCTCCTCATCAC--CTCTCTCTCTGTCC-TTAGA-
      560      570      580      590      600

780      790      800      810      820      830      840
M TGTGGGAAGCTTCACGGGAGACGATGACAAGATCTACTTCTTTCAGTGAGCGGGCAGTGGAGTATGAC
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
H -----ACATGCTCACCTTCA-CTT-TG-GAGCA--TGGAGAGTTTGA-
      610      620      630      640

850      860      870      880      890      900      910
M TGCTATCCGAGCAGGTGGTGGCTCGTGTGGCGAGAGTCTGTAAGGGTGACATGGGGGAGCACGGACGC
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
H -----AGATGG-----GAAGGGCAAGTGTG-----C-----CTATGACCCC
      650      660      670

920      930      940      950      960      970      980
M TGCAGAAAGAAATGGACGACGTTCCCTGAAGGCTCGGTTGGTGTGCTCAGCCCCCTGACTGGAAGTCTACTT
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
H AGCTAAGGGCCATGCTGGCCCTTCTTGT-GGATGGTGAGCTGTACTCGGCCAC--ACT-----CAACAA
      680      690      700      710      720      730

990      1000      1010      1020      1030      1040      1050
M CAACCAGCTGAAGGCGGTGCACACCCCTGCGGGGCGCCTCTTGGCACAACACCACCTTCTTCGGGGTTTTT
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
H CTTCCCTG-----GGCA-----CGGAAC-CCA-TTATC-----CTGCG-----TAA
      740      750      760

```

Fig. 3K


```

1410      1420      1430      1440      1450      1460      1470
M CACCTATACAGTGTGTTTCATGTGTACAGGAGATGGCTGGCTGCTGAAGGCTGTGAGCCCTGGGGCCCTGG
: . . . . : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
H C--CGTGTCTG-----CAAGGG--C--GATATGGGGGGC-----GCA-----C--GGACCCCTG--
960      970      980      990

1480      1490      1500      1510      1520      1530      1540
M ATCCACATGGTGGAGGAACTGCAGGTGTTTGACCAGGAGCCAGTGGAAAGTCTGGTGTCTCAGAGCA
: : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
H -----GAGGAA-----GTG-----GACCACGTTCCCTG-----AAGGC-----GCGG---CTG-GCA
1000     1010     1020     1030

1550      1560      1570      1580      1590      1600      1610
M AGAAGGTGCTCTTTGCTGGCTCCCGCTCTCAGCTGGTTCAGCTGTCTCTGGCCGACTGCACAAAGTACCG
: : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
H -----TGCTCT-----GC-CCCGAACT-GGCAG-CTCTACT-TCA---ACCAGCTGCA---GG---CG
1040     1050     1060     1070     1080

1620      1630      1640      1650      1660      1670      1680
M TTTCGTGTAGACTGTGTCTCGCCAGGACCCCTTACTGTGCTGGAATGTCAACACCAGCCGCTGTGTG
: : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
H ATGC-----ACA---CCCTG--CAGGACACCT-----CCTGGCA---CAACACCACCTTCTTTGGG
1090     1100     1110     1120     1130

1690      1700      1710      1720      1730      1740      1750
M GCCACCACAGTGGTCGCTCGGGGTCCCTTTCTGGTCCAACATGTGGCGAACTTGGACACTTCAAAGATGT
: . . . . : : : : : : : : : : : : : : : : : : : : : : : : : : : :
H GTTT--TTCAA-----GCACAGTGG-----GGT--GACATGTACCTGTC---GGC-CATCTG---TGA
1140     1150     1160     1170

```

Fig. 3M

```

1760      1770      1780      1790      1800      1810      1820
M GTAACCAAGTATGGCATTAATAAAGTCAGATCTATTCCCAAGAACAATCACCGTTGTGTCAGGCACAGACCT
::: ::::: ::::: ::::: ::::: ::::: :::::
H GTA-CCAGT-TGG-----AAG--AGATC-----CAGCG--GGTGTGAGG-----
1180      1190      1200      1210

1830      1840      1850      1860      1870      1880      1890
M GGTCCCTACCCCTGCCACCTCTCGTCCAAATTGGCCCCATGCCCACTGGACCTTCGGAAGCCAGGACCTGCCT
::: ::::: ::::: ::::: ::::: ::::: :::::
H -----GCC-----CCTATAAGGA--GTACC---ATGA-----GGAAGC-----CCA
1220      1230      1240

1900      1910      1920      1930      1940      1950      1960
M GCAGAACCAACCTGGCTCCTTTCTTTATGACACGGGACTCCAGGCGCTGGTGGTATGCCCGCACAGTCCC
: : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
H GAAGTGGGACC--GCTAC--ACT---GACCCTGTAC-CCAGGCCCTGGTGTGATGGCTGCCCAAGCCCCC
1250      1260      1270      1280      1290      1300

1970      1980      1990      2000      2010      2020      2030
M GTCACCTCTGGACCCCTATCGTTGCTATTACAGAGCAGGAGGACAGACTGGCTGCAGAAAGCTACCTTGT
: : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
H GCCATGCCGGGGCCTACCACTGCTTTTCAGAGGAGCAGGGGGCGGCTGGCTGCTGAAGGCTACCTTGT
1310      1320      1330      1340      1350      1360      1370

2040      2050      2060      2070      2080      2090      2100
M TGCTGTCGTGGCCGGCTCGTCGGTGACACTGGAGGCACGGGCTCCCTTGGAACCTGGGGCTCGTGTGG
: : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
H GGCTGTCGTGGCAGGCCCGTCGGTGACCTTGAGGCCCCGGCCCCCTGGAAAAACCTGGGGCTGGTGTGG
1380      1390      1400      1410      1420      1430      1440

```

Fig. 3N

Fig. 30

Fig. 3P

```

2800      2810      2820      2830      2840      2850      2860
M ACTTCAGCCTCACAGGAGACA-CACCCTCCTCT--GTGAATTGAGACATGTGGACCCAGCAGCCAAA
.. : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
H GCACCAGCCTCGCAGAAGGCATCTTCCTCCTCTCTGTGAATCACAGACACGCGGACCCAGCCGCCAAA
2140      2150      2160      2170      2180      2190      2200

2870      2880      2890      2900      2910      2920
M ACTTTGCAAGGAAGAGGTTTCAAGATGTGGCGGTGTTTGTGCAT--ATATGTGTTGGTATGCATGTGGAA
: : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
H ACTTTTCAAGGCAGAAAGTTTCAAGATGTGTGTTGTCTGTATTTGCACATGTGTTTGTGTGTGTAT
2210      2220      2230      2240      2250      2260      2270

2930      2940      2950      2960      2970      2980      2990
M GAAATGTGTGTGTGTGTG---TGTTGTTGTAACCTTCCCTGTCTCTATCACGTCTTCCCTTGGCCTGG
: : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
H GTGTGTGTGCACGCGGTGCGCGCTTGTGGCATAGCCTTCCCTGTCTTCTGTCAAGTCTTCCCTTGGCCTGG
2280      2290      2300      2310      2320      2330      2340

3000      3010      3020      3030      3040      3050      3060
M GGTCCCTCCTGGTTGAGTCTTTGGAGCTATGAAGGGAAGGGGTATAGCAGTCTTGTCTCTCCACCCCC
: : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
H G-TCCCTCCTGGT-GAGTCATTGGAGCTATGAAGGGAAGGGG-TCGTATCACTTTGTCTCTCTCCACCCCC
2350      2360      2370      2380      2390      2400      2410

3070      3080      3090      3100      3110      3120      3130
M AGCTGTCCCAAGCTTTGGGGCAGTGATGTACATACGGGGAAGGAAGACAGGTTGTGTACCCCTTTTG
: : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
H A-CTGCCCCGAG-TGTCGGGCAGCGATGTACATATGGAGGTGGGTGGACAGGTTGTGTGCCCCCTTCAG
2420      2430      2440      2450      2460      2470      2480

```

Fig. 3Q

```

3140      3150      3160      3170      3180      3190      3200
M GGGAGTGGGACTCGGGGTGGCCCTAGCCCTGCTCCTAGGCTGTGAATGTTTCAGGCGGGGGTT
. ....: : .....: : .....: : .....: : .....: : .....:
H AGGAGTGCAGGGCT-TGGGTGGCCCTAGTCTCTCCTAGGCTGTGAATGTTTCAGGGTGGGGGA
2490      2500      2510      2520      2530      2540      2550

3210      3220      3230      3240      3250      3260      3270
M GGGGTGGAGATGGAACCTCCTGC--TTCAGGGGAGGGGTGGCAGGCCCTCCACTTGCCCTCCGGG
:: .....: : .....: : .....: : .....: : .....: : .....:
H GGG-----AGATGAGCCTCCTGTGTGTTTGGGGGAAGGTGGTGGGCCCTCCACTTGCCCCCGGG
2560      2570      2580      2590      2600      2610

3280      3290      3300      3310      3320      3330
M TTCGGTGGTATTTTATATTTCGCTCTTC-TG-ACAGGCTGGGAAGG--TTGTTGGGAGGGAAGG
: .....: : .....: : .....: : .....: : .....: : .....:
H TTCAGTGGTATTTTATACTTGCCCTTCTTCTGTACAGGGCTGGAAAGGCTGTGTGAGGGAGAGAAGG
2620      2630      2640      2650      2660      2670      2680

3340      3350      3360      3370      3380      3390      3400
M AGGAGTGGGCATGCTATGGATACTGGCCCTATCCTCTCCCTGCTCTGGGAAAAGGCT---AACAGTGA
: .....: : .....: : .....: : .....: : .....: : .....:
H AGAGGTGGCCCTGCTGTGGACAAATGGCATACTCTCTTCCAGCCCTAGGAGGAGGCTCCTAACAGTGA
2690      2700      2710      2720      2730      2740      2750

3410      3420      3430      3440      3450      3460      3470
M ACTTATTGTGTCCCCACATATTTATTGTTGTGTAATAATTGAGTATTTTATATTGACAAATAAAATGGA
: .....: : .....: : .....: : .....: : .....: : .....:
H ACTTATTGTGTCCCCGGTATTTATTGTTGTGTAATAATTGAG-ATTTTATATTGA-----
2760      2770      2780      2790      2800      2810

```

Fig. 3R

GTCGACCCACGCGTCCGCGGACGCGTGGCGCGCGGGGCCATCCAGACCCCTGCGGAGAGCGGCCGCGAGCGTCGCC	79
GAGGTTTGAGGGCGCGGAGACCGAGGGCCTGGCGGCCGAAGAACCGCCCCAAGAGAGCCTCTGCCCCGGGGGCTGC	158
M F T L L V L L	
TGGAACATGTGCGGGGACACAGTTTGTGACAGTTGCCAGACT ATG TTT ACG CTT CTG GTT CTA CTC	228
S Q L P T V T L G F P H C A R G P K A S	28
AGC CAA CTG CCC ACA GTT ACC CTG GGG TTT CCT CAT TGC GCA AGA GGT CCA AAG GCT TCT	288
K H A G E E V F T S K E E A N F F I H R	48
AAG CAT GCG GGA GAA GAA GTG TTT ACA TCA AAA GAA GAA GCA AAC TTT TTC ATA CAT AGA	348
R L L Y N R F D L E L F T P G N L E R E	68
CGC CTT CTG TAT AAT AGA TTT GAT CTG GAG CTC TTC ACT CCC GGC AAC CTA GAA AGA GAG	408
C N E E L C N Y E E A R E I F V D E D K	88
TGC AAT GAA GAA CTT TGC AAT TAT GAG GAA GCC AGA GAG ATT TTT GTG GAT GAA GAT AAA	468
T I A F W Q E Y S A K G P T T K S D G N	108
ACG ATT GCA TTT TGG CAG GAA TAT TCA GCT AAA GGA CCA ACC ACA AAA TCA GAT GGC AAC	528

Fig. 4A

R	E	K	I	D	V	M	G	L	L	T	G	L	I	A	A	G	V	F	L	128
AGA	GAG	AAA	ATA	GAT	GTT	ATG	GGC	CTT	CTG	ACT	GGA	TTA	ATT	GCT	GCT	GGA	GTA	TTT	TTG	588
V	I	F	G	L	L	G	Y	Y	L	C	I	T	K	C	N	R	L	Q	H	148
GTT	ATT	TTT	GGA	TTA	CTT	GGC	TAC	TAT	CTT	TGT	ATC	ACT	AAG	TGT	AAT	AGG	CTA	CAA	CAT	648
P	C	S	S	A	V	Y	E	R	G	R	H	T	P	S	I	I	F	R	R	168
CCA	TGC	TCT	TCA	GCC	GTC	TAT	GAA	AGG	GGG	AGG	CAC	ACT	CCC	TCC	ATC	ATT	TTC	AGA	AGA	708
P	E	E	A	A	L	S	P	L	P	P	S	V	E	D	A	G	L	P	S	188
CCT	GAG	GAG	GCT	GCC	TTG	TCT	CCA	TTG	CCG	CCT	TCT	GTG	GAG	GAT	GCA	GGA	TTA	CCT	TCT	768
Y	E	Q	A	V	A	L	T	P	R	K	H	S	V	S	P	P	P	Y	P	208
TAT	GAA	CAG	GCA	GTG	GCG	CTG	ACC	AGA	AAA	CAC	AGT	GTT	TCA	CCA	CCA	CCA	CCA	TAT	CCT	828
G	H	T	K	G	F	R	V	F	K	K	S	M	S	L	P	S	H	*		227
GGG	CAC	ACA	AAA	GGA	TTT	AGG	GTA	TTT	AAA	AAA	TCT	ATG	TCT	CTC	CCA	TCT	CAC	TGA		885
CTACCT	TGTCAT	TTT	TGGTATA	AGAA	TTT	TGT	TTATTT	GATAGGCCGGCAT	GGTGCTCAT	GGCTGTAAT	CCCAGCAC									964
TTTGGAG	GGCCAGGAG	TT	CGAGAC	CAGCCT	GGCCAA	CATGGT	GAAACCCGGT	CTCTACT	AAAAATTC	AAAAAT	TACCTA									1043
GGCGT	CATGGGG	CATGCCT	GTAGT	CCCCACCT	ACT	TTGGAG	GGCTGA	AGCAGG	AGAA	TTGCT	CGAA	ACCTGGG	AGGCAG	AGG						1122

Fig. 4B

Fig. 4C

GTCGACCCAC	GGTCCGCTG	CGTTCTCACC	CCTGGACCAC	CCTGGAGAA	CAGTTGACCG	60
AAGTTTGTTT	GGCAGTTGCT	GCTGGACT	ATG TTT CTG	CTT CTG	GTA CTC	112
	Met	Phe	Leu	Leu	Val Val	Leu
	1				5	
AGC CAG CTG	CCC AGA CTT	ACC CTC	GCG GTT	CCT CAT	ACA AGA	AGC CTA
Ser Gln	Leu Pro	Arg Thr	Leu Ala	Val Pro	His Thr	Arg Ser
	10				20	
AAG AAT TCT	GAA CAT	GCC CCA	GAA GGC	GTC TTT	GCA TCA	AAA GCA
Lys Asn	Ser Glu	His Ala	Pro Glu	Gly Val	Phe Ala	Ser Lys
	25				35	
					40	
GCA AGC ATC	TTT ATG	CAC CAC	CGT CGC	CTC CTA	TAC AAT	AGA TTT
Ala Ser	Ile Phe	Met His	Arg Arg	Leu Leu	Tyr Asn	Arg Phe
	45				50	
					55	
GAA CTC TTC	ACT CCC	GGG AAC	CTG GAG	AGA GAG	TGC TAT	GAG TTC
Glu Leu	Phe Thr	Pro Glu	Leu Asn	Leu Arg	Glu Cys	Tyr Glu
	60				65	
					70	
TGT AGT TAT	GAA GAA	GCC AGA	GAG ATC	CTC GGG	GAC AAC	GAA ATG
Cys Ser	Tyr Glu	Glu Ala	Arg Glu	Ile Leu	Gly Asp	Glu Glu
	75				80	
					85	
						Met

Fig. 4E

ATC ACA TTC TGG CGG GAA TAT TCA GTC AAA GGA CCA ACC ACA AGA TCA	400
Ile Thr Phe Trp Arg Glu Tyr Ser Val Lys Gly Pro Thr Thr Arg Ser	
90 95 100	
GAT GTC AAC AAA GAG AAA ATT GAT GTT ATG GGC CTT CTG ACT GGC TTA	448
Asp Val Asn Lys Glu Lys Ile Asp Val Met Gly Leu Thr Gly Leu	
105 110 115 120	
ATT GCG GCT GGA GTA TTC TTG GTT GTT TTT GGC TTA CTT GGT TAC TAT	496
Ile Ala Ala Gly Val Phe Leu Val Val Phe Gly Leu Leu Gly Tyr Tyr	
125 130 135	
CTG TGT ATC ACC AAG TGT AAT AGG CAG CCA TAT CAA GGT TCT TCA GCT	544
Leu Cys Ile Thr Lys Cys Asn Arg Gln Pro Tyr Gln Gly Ser Ser Ala	
140 145 150	
GTC TAC ACA AGA AGG ACC AGG CAC ACA CCG TCC ATC ATT TTC AGA ACC	592
Val Tyr Thr Arg Arg Thr Arg His Thr Pro Ser Ile Ile Phe Arg Thr	
155 160 165	
CAT GAG GAA GCT GTC TTG TCT CCA TCG TCA TCC TCA GAG GAC GCG GGA	640
His Glu Glu Ala Val Leu Ser Ser Ser Ser Ser Ser Glu Asp Ala Gly	
170 175 180	

Fig. 4F

CTA CCT TCC TAT GAA CAG GCA GTA GCT CTG ACC AGA AAA CAC AGT GTC	688
Leu Pro Ser Tyr Glu Gln Ala Val Ala Leu Thr Arg Lys His Ser Val	200
185	
TCA CCA CCA CCT CCA TAT CCT GGG CCA GCA AAA GGA TTT AGG GTA TTT	736
Ser Pro Pro Pro Tyr Pro Gly Pro Ala Lys Gly Phe Arg Val Phe	215
205	
210	
AAA AAG TCA ATG TCA CTC CCA TCT CAC TAAGCCCACC TTGCCGCCCTT	783
Lys Lys Ser Met Ser Leu Pro Ser His	
220	
225	
GCTGTGGTCT GAATAATATG TTCTTCCTGA AACAAACAACA ACAAATAAAT TTGCCTGTTC	843
AGCTTTTAT GACAAAGCAC AAGGAATAAA GGAACACTAT ATACAGAACA GAATTCACCA	903
CAGCCCCGCT TTCAGCTCTG CCCCCAACTG GATTGCTGTC TTGGTAAGAG ACTTCTACCG	963
TGCTTCCTCG AAGTTAAGAA GAAAGTGCCT TTTTGCAATG TAAACTGTAC TGGTTCAAAC	1023
ATTCTTGCTA CAGCTAGGTA CCTATAATCC CCACCTTCAG GAGACTTAGG CGGAGGGAT	1083
GAGAGTTCAA GGCCAGCCTG GGCCCTGTCA GGACGCTGTC TCAAAACAAA GTTTGTTATC	1143
AATAGAAATAA TTAGAAATTA CAAACTAGGA TTTTCAGTCT TAAGTCATGA TATTGGATCT	1203
TCTCTTCAGT AAGGTTTCTT TTGGGCTAGA AATACTTCAT AGAATTGAC ATTTTGGTAT	1263
ACATCTGTGG CCTTGATACA ATGACTTGAT TTTCTGTTTT AATTAGTGCA GAGGATTCAG	1323
CAAAATTGCA GGTCTTCATT TTGTTCCCTC GCTATCCATC GATCATGTTT CAGTGTATTA	1383
AGAGGAGTCA GCCAGGCGTG GTGGCCACA CCTGTGATCC CAGCACTTAG GGGGGCATAG	1443
GCAGGCAGAT CTCTGTGAGC TGAAGGACAG CCTGGCCTAC AAAGTCCAGG ACAACCGAGA	1503
CCACACAGAG AAACCTTGTC TTGAAAAACA AAACAAAAAC AAGAGAGAGA GAGAGAGAGA	1563

Fig. 4G

GAGAAAAGAG ATGTCAAGAG GTTTTGTGTT TTTTTTTTTT AAATTACTAT TTATGGGCCT 1623
CACTTGGAAG AGTGCTTGCC ATGCAAAATAG AAGGACAGGA GTTCAATCCT CATTACCCAC 1683
ATTTGAAACA AATAACAAGA AAAACAACC AAAAACCAC AACAACAAA ATCTTGAGAA 1743
CTTGAGTGAA TACCGGTAA CTCAGGGCTA GGCACGTGTA CTGAATCAGG AGCTCCAGA 1803
TCCAGGGAAG CGCTGTCTCA ACAATAAAT AAATAAGTAA GTCAGTGAGG TGGTCTTTAA 1863
ACCCAGCACT TGAGAGCCAA AGGCAGGCAG AGCTCAGTGA GTTGAGAGCC AGCTGGTCT 1923
ACAAAGCAAG TTCTAAGGA GCCAGGGCAC AGAGAAACCC TGTCTGAAGG AAAAAAATA 1983
AAAAAAAAG GCGGCCCGC 2002

Fig. 4H

G	248	GGGACAAACGAAAGAAATGATCACATTCTGGCGGGAATATTCAAGTCAAAGGA	297
H	251	TGGATGAAGATAAAACGATTGCATTTTGGCAGGAATATTCAAGCTAAAGGA	300
G	298	CCAACCACAAAGATCAGATGTCAACAAAGAGAAAAATTGATGTTATGGGCCT	347
H	301	CCAACCACAAAAATCAGATGGCAACAGAGAGAAAAATAGATGTTATGGGCCT	350
G	348	TCTGACTGGCTTAATTGCGGCTGGAGTATCTTGGTTGTTTGGCCTTAC	397
H	351	TCTGACTGGATTAATTGCTGCTGGAGTATTTTGGTTATTTTGGATTAC	400
G	398	TTGGTTACTATCTGTGTATCACCAAGTGTAATAGGCAGCCATATCAAGGT	447
H	401	TTGGCTACTATCTTTGTATCACTAAGTGTAATAGGCTACAACATCCATGC	450
G	448	TCTTCAGCTGTCTACACAAGAGGACCAGGCACACACCCGTCCATCATTTT	497
H	451	TCTTCAGCCCGTCTATGAAAGGGG...AGGCACACTCCCTCCATCATTTT	497

Fig. 4J

G 1 MFLLLVLSQLPRLTLAVPH.TRSLKNSEHAPEGVFASKKAASIFMHRRL 49
 H 1 MFTLLVLSQLPTVTGLGPHCARGPKASKHAGEEVFTSKEEANFFIHRRL 50
 G 50 LYNRFDELFTPGNLERECYEEFCSEYEEAREILGDNEEMITFWREYSVKG 99
 H 51 LYNRFDELFTPGNLERECNEELCNVEEAREIFVDEDKTIAFWQEYSAGK 100
 G 100 PTTSDVNKEKIDVMGLLTGIIAAGVFLVVFGLLGYLGCITKCNRPYQG 149
 H 101 PTTKSDGNREKIDVMGLLTGIIAAGVFLVIFGLLGYLGCITKCNRLQHPC 150
 G 150 SSAVYTRRTRHPTPSIIFRTHHEEAVLSP.SSSSEDAGLPSYEQAVALTRKH 198
 H 151 SSAVY.ERGRHPTPSIIFRRPEEAALSPLPPSVEDAGLPSYEQAVALTRKH 199
 G 199 SVSPPPPPYCPAKGFRVFKKMSMLPSH 225
 H 200 SVSPPPPPYPGHTKGFRVFKKMSMLPSH 226

Fig. 4L

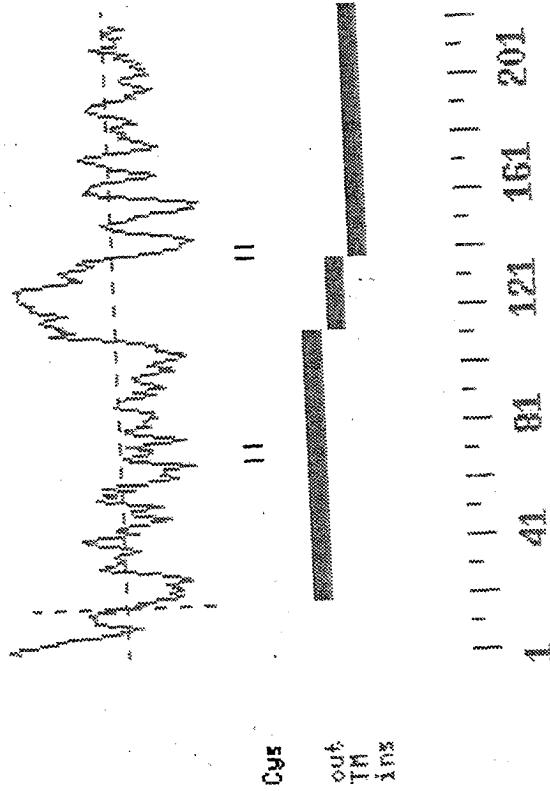


Fig. 4M

GTCGACCCACGCGTCGGAAATGTCGTTCTTCAGATTAAAAAGAAAACCTTTACTGAATCAGCTGAGTGTTAATAA	79
CGAATTTCCTTTTCTTGCCAAATTCGATCTGAACAGAAAATCCAAGAACAGGGAT ATG TGT GGA TTA CAG TTT	6 152
S L P C L R L F L V V T C Y L L L L L H	26
TCT CTG CCT TGC CTA CGA CTG TTT CTG GTT ACC TGT TAT CTT TTA TTA CTC CAC	212
K E I L G C S S V C Q L C T G R Q I N C	46
AAA GAA ATA CTT GGA TGT TCG TCT GTT TGT CAG CTC TGC ACT GGG AGA CAA ATT AAC TGC	272
R N L G L S S I P K N F P E S T V F L Y	66
CGT AAC TTA GGC CTT TCG AGT ATT CCT AAG AAT TTT CCT GAA AGT ACA GTT TTT CTG TAT	332
L T G N N I S Y I N E S E L T G L H S L	86
CTG ACT GGG AAT AAT ATA TCT TAT ATA AAT GAA AGT GAA TTA ACA GGA CTT CAT TCT CTT	392
V A L Y L D N S N I L Y V Y P K A F V Q	106
GTA GCA TTG TAT TTG GAT AAT TCT AAC ATT CTG TAT GTA TAT CCA AAA GCC TTT GTT CAA	452
L R H L Y F L F L N N N F I K R L D P G	126
TTG AGG CAT CTA TAT TTT CTA TTT CTA AAT AAT TTC ATC AAA CGC TTA GAT CCT GGA	512

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Fig. 5A

[illegible]

Fig. 5B

D L E N L N S D T F S L L K N L I Y L K 306
 GAT TTA GAG AAT TTA AAT TCT GAC ACA TTC AGT TTG TTA AAG AAT TTA ATT TAC CTT AAG 1052

 L D R N R I I S I D N D T F E N M G A S 326
 TTA GAT AGA AAC AGA ATA ATT AGC ATT GAT AAT GAT ACA TTT GAA AAT ATG GGA GCA TCT 1112

 L K I L L N L S F N N L T A L H P R V L K 346
 TTG AAG ATC CTT AAT CTG TCA TTT AAT AAT CTT ACA GCC TTG CAT CCA AGG GTC CTT AAG 1172

 P L S S L I H L Q A N S N P W E C N C K 366
 CCG TTG TCT TCA TTG ATT CAT CTT CAG GCA AAT TCT AAT CCT TGG GAA TGT AAC TGC AAA 1232

 L L G L R D W L A S S A I T L N I Y C Q 386
 CTT TTG GGC CTT CGA GAC TGG CTA GCA TCT TCA GCC ATT ACT CTA AAC ATC TAT TGT CAG 1292

 N P P S M R G R A L R Y I N I T N C V T 406
 AAT CCC CCA TCC ATG CGT GGC AGA GCA TTA CGT TAT ATT AAC ATT ACA AAT TGT GTT ACA 1352

 S S I N V S R A W A V V K S P H I H K 426
 TCT TCA ATA AAT GTA TCC AGA GCT TGG GCT GGT GTA AAA TCT CCT CAT ATT CAT CAC AAG 1412

 T T A L M M A W H K V T T N G S P L E N 446
 ACT ACT GCG CTA ATG ATG GCC TGG CAT AAA GTA ACC ACA AAT GGC AGT CCT CTG GAA AAT 1472

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Fig. 5C

T	E	T	E	N	I	T	F	W	E	R	I	P	T	S	P	A	G	R	F	466
ACT	GAG	ACT	GAG	AAC	ATT	ACT	TTC	TGG	GAA	CGA	ATT	CCT	ACT	TCA	CCT	GCT	GGT	AGA	TTT	1532
F	Q	E	N	A	F	G	N	P	L	E	T	T	A	V	L	P	V	Q	I	486
TTT	CAA	GAG	AAT	GCC	TTT	GGT	AAT	CCA	TTA	GAG	ACT	ACA	GCA	GTG	TTA	CCT	GTG	CAA	ATA	1592
Q	L	T	T	S	V	T	L	N	L	E	K	N	S	A	L	P	N	D	A	506
CAA	CTT	ACT	ACT	TCT	GTT	ACC	TTG	AAC	TTG	GAA	AAA	AAC	AGT	GCT	CTA	CCG	AAT	GAT	GCT	1652
A	S	M	S	G	K	T	S	L	I	C	T	Q	E	V	E	K	L	N	E	526
GCT	TCA	ATG	TCA	GGG	AAA	ACA	TCT	CTA	ATT	TGT	ACA	CAA	GAA	GTT	GAG	AAG	TTG	AAT	GAG	1712
A	F	D	I	L	L	A	F	F	I	L	A	C	V	L	I	I	F	L	I	546
GCT	TTT	GAC	ATT	TTG	CTA	GCT	TTT	TTC	ATC	TTA	GCT	TGT	GTT	TTA	ATC	ATT	TTT	TTG	ATC	1772
Y	K	V	V	Q	F	K	Q	K	L	K	A	S	E	N	S	R	E	N	R	566
TAC	AAA	GTT	GTT	CAG	TTT	AAA	CAA	AAA	CTA	AAG	GCA	TCA	GAA	AAC	TCA	AGG	GAA	AAT	AGA	1832
L	E	Y	Y	S	F	Y	Q	S	A	R	Y	N	V	T	A	S	I	C	N	586
CTT	GAA	TAC	TAC	AGC	TTT	TAT	CAG	TCA	GCA	AGG	TAT	AAT	GTA	ACT	GCC	TCA	ATT	TGT	AAC	1892
T	S	P	N	S	L	E	S	P	G	L	E	Q	I	R	L	H	K	Q	I	606
ACT	TCC	CCA	AAT	TCT	CTA	GAA	AGT	CCT	GGC	TTG	GAG	CAG	ATT	CGA	CTT	CAT	AAA	CAA	ATT	1952

Fig. 5D

V	P	E	N	E	A	Q	V	I	L	F	E	H	S	A	L	*	623
GTT	CCT	GAA	AAT	GAG	GCA	CAG	GTC	ATT	CTT	TTT	GAA	CAT	TCT	GCT	TTA	TAA	2003
CTCAACTAAATATTGTCCTATAAGAAACTTCAGTGCCCATGGACATGATTTAAACTGAAACCTCCTTATATAATTATATAC																	2082
TTTAGTTGGAAATATAATGAATTATATAGAGGTAGCATTATTAAAAATATGTTTTTAATAAAAAAAAAAAAAAAGG																	2161
GCGGCCGC																	2169

Fig. 5E

003730 1075000

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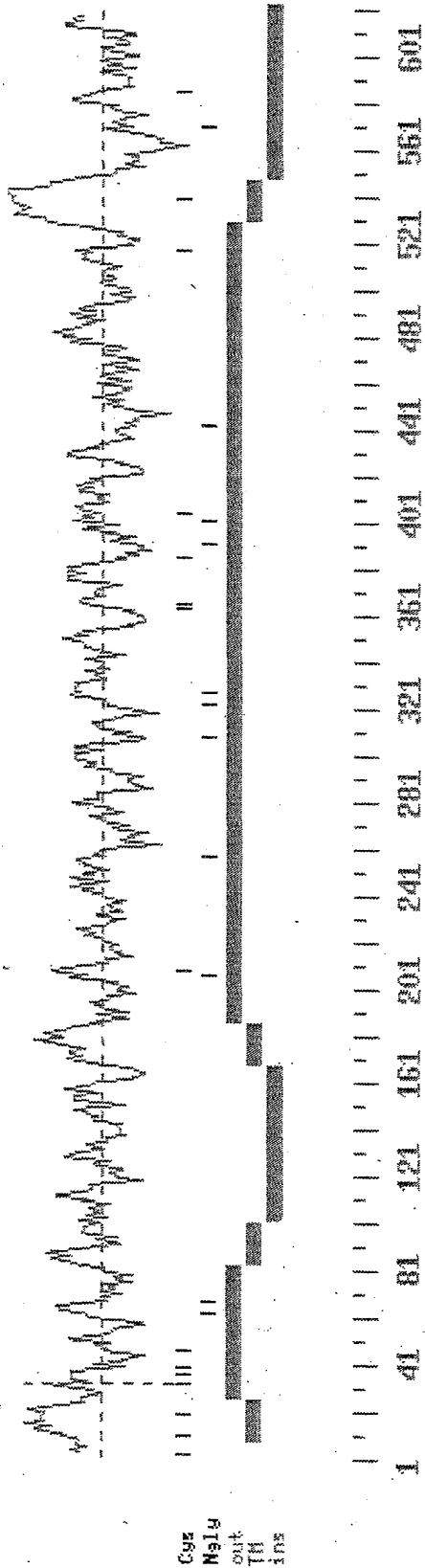


Fig. 5F

Fig. 5G

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280      290      300      310      320      330      340
slit AACTCSNNIVDCRGKGLTEIPTNLPETITEIRLEQNTIKVIPPGAFSPYKKLRRIDLNNQISELAPDAF
325 -----LR-----ISE-----SGFQHLENLACL-----
      350      360      370      380      390      400      410
slit QGLRSLNSLVLYGNKITELPKSLFEGFLSLQLLLLNANKINCLRVDAFQDLHNLNLLSLYDNKLTIAKG
      325 -----LR-----ISE-----SGFQHLENLACL-----
      420      430      440      450      460      470      480
slit TFSPLRAIQTMHLAQNPFICDCHLKWLAADYLHTNPIETSGARCTSPRRLANKRIGQIKSKKFRCSAKEQY
      325 -----LR-----ISE-----SGFQHLENLACL-----
      490      500      510      520      530      540      550
slit FIPGTEDYRSKLSGDCFADLACPEKCRCEGTVDCSNQKLNKIPEHIPQYTAELRLNNEFTVLEATGIF
      325 -----LR-----ISE-----SGFQHLENLACL-----

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Fig. 5H

Fig. 51

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840      850      860      870      880      890      900
Slit  GNDISVVEGAFNDLSALSHLAIGANPLYCDCNMQLSDWVKSEYKEPGIARCAGPGEMADKLLLTTPSK
      325  -----SSLIHLQANSNPWECNCKLLGLRDWLAS-----
      350      360      370

910      920      930      940      950      960      970
Slit  KFTCQGPVDVNILAKCNPCLSNPCKNDGTCNSDPVDFYRCTCPYGFKGQDCDVPIHACISNPCKHGGTCH
      325  ....:
      SAITLNI-----Y-----CQNP-----PSMRG-----
      380      390

980      990      1000      1010      1020      1030      1040
Slit  LKEGEEDGFWCICADGFEGENCEVNVDDCEDNDCENNSTCVDGINNYTCLCPPEYTGELCEEKLDFFCAQD
      325  ....:
      RALRYI-----NITNCV-----
      400

1050      1060      1070      1080      1090      1100      1110
Slit  LNPCQHDSKCILTPKGFKCDCTPGYVGEHCIDIDFDDCQDNKCKNGAHCTDAVNGYTCICPEGYSGLFCEF
      325  -----:....:
      TSSIN-----
      410

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Fig. 5J

[illegible][illegible]

NAME	ADDRESS	CITY	STATE	ZIP	DATE	TIME	REMARKS
Mr. J. H. Smith	123 Main St.	Springfield	Ill.	62761	10/15/68	10:30	Called to report problem with machine.
Mr. R. L. Jones	456 Oak Ave.	Chicago	Ill.	60601	10/16/68	11:00	Arrived for service.
Mr. T. E. Brown	789 Elm St.	Peoria	Ill.	61601	10/17/68	9:00	Machine not working properly.
Mr. W. D. White	321 Pine St.	Rockford	Ill.	61101	10/18/68	10:15	Service completed successfully.
Mr. C. F. Green	654 Maple St.	Decatur	Ill.	62521	10/19/68	11:30	Parts ordered for machine.
Mr. B. G. Black	987 Cedar St.	Normal	Ill.	62451	10/20/68	10:45	Machine repaired and tested.
Mr. A. J. Gray	147 Birch St.	Urbana	Ill.	62501	10/21/68	9:30	Customer satisfied with service.
Mr. S. K. Hall	258 Walnut St.	Champaign	Ill.	61821	10/22/68	11:15	Machine delivered to customer.
Mr. L. M. Young	369 Spruce St.	Carbondale	Ill.	62901	10/23/68	10:00	Service call scheduled for next week.
Mr. P. Q. King	470 Ash St.	Macomb	Ill.	61451	10/24/68	11:45	Machine working fine.
Mr. D. R. Lee	581 Hickory St.	Edwardsville	Ill.	62021	10/25/68	9:15	Customer called to check on progress.
Mr. F. T. Scott	692 Poplar St.	St. Louis	Mo.	63101	10/26/68	10:30	Machine delivered to St. Louis.
Mr. G. U. Adams	703 Willow St.	Springfield	Mo.	65801	10/27/68	11:00	Service call completed.
Mr. H. V. Baker	814 Cherry St.	Jefferson City	Mo.	64501	10/28/68	9:45	Machine not working.
Mr. I. W. Carter	925 Elm St.	St. Joseph	Mo.	64501	10/29/68	10:15	Parts ordered for machine.
Mr. J. X. Evans	1036 Maple St.	Warrensburg	Mo.	64081	10/30/68	11:30	Machine repaired and tested.
Mr. K. Y. Foster	1147 Oak St.	Springfield	Mo.	65801	10/31/68	10:45	Customer satisfied with service.
Mr. L. Z. Grant	1258 Pine St.	Springfield	Mo.	65801	11/01/68	9:30	Machine delivered to customer.
Mr. M. A. Harris	1369 Cedar St.	Springfield	Mo.	65801	11/02/68	11:15	Service call scheduled for next week.
Mr. N. B. Ingram	1470 Birch St.	Springfield	Mo.	65801	11/03/68	10:00	Machine working fine.
Mr. O. C. Jackson	1581 Walnut St.	Springfield	Mo.	65801	11/04/68	11:45	Customer called to check on progress.
Mr. P. D. Keller	1692 Spruce St.	Springfield	Mo.	65801	11/05/68	9:15	Machine delivered to St. Louis.
Mr. Q. E. Lewis	1703 Willow St.	Springfield	Mo.	65801	11/06/68	10:30	Service call completed.
Mr. R. F. Miller	1814 Cherry St.	Springfield	Mo.	65801	11/07/68	11:00	Machine not working.
Mr. S. G. Nelson	1925 Elm St.	Springfield	Mo.	65801	11/08/68	9:45	Parts ordered for machine.
Mr. T. H. Owen	2036 Maple St.	Springfield	Mo.	65801	11/09/68	11:30	Machine repaired and tested.
Mr. U. I. Parker	2147 Oak St.	Springfield	Mo.	65801	11/10/68	10:45	Customer satisfied with service.
Mr. V. J. Quinn	2258 Pine St.	Springfield	Mo.	65801	11/11/68	9:30	Machine delivered to customer.
Mr. W. K. Roberts	2369 Cedar St.	Springfield	Mo.	65801	11/12/68	11:15	Service call scheduled for next week.
Mr. X. L. Scott	2470 Birch St.	Springfield	Mo.	65801	11/13/68	10:00	Machine working fine.
Mr. Y. M. Taylor	2581 Walnut St.	Springfield	Mo.	65801	11/14/68	11:45	Customer called to check on progress.
Mr. Z. N. Thomas	2692 Spruce St.	Springfield	Mo.	65801	11/15/68	9:15	Machine delivered to St. Louis.
Mr. A. O. White	2703 Willow St.	Springfield	Mo.	65801	11/16/68	10:30	Service call completed.
Mr. B. P. Young	2814 Cherry St.	Springfield	Mo.	65801	11/17/68	11:00	Machine not working.
Mr. C. Q. Adams	2925 Elm St.	Springfield	Mo.	65801	11/18/68	9:45	Parts ordered for machine.
Mr. D. R. Baker	3036 Maple St.	Springfield	Mo.	65801	11/19/68	11:30	Machine repaired and tested.
Mr. E. S. Carter	3147 Oak St.	Springfield	Mo.	65801	11/20/68	10:45	Customer satisfied with service.
Mr. F. T. Evans	3258 Pine St.	Springfield	Mo.	65801	11/21/68	9:30	Machine delivered to customer.
Mr. G. U. Foster	3369 Cedar St.	Springfield	Mo.	65801	11/22/68	11:15	Service call scheduled for next week.
Mr. H. V. Grant	3470 Birch St.	Springfield	Mo.	65801	11/23/68	10:00	Machine working fine.
Mr. I. W. Harris	3581 Walnut St.	Springfield	Mo.	65801	11/24/68	11:45	Customer called to check on progress.
Mr. J. X. Ingram	3692 Spruce St.	Springfield	Mo.	65801	11/25/68	9:15	Machine delivered to St. Louis.
Mr. K. Y. Jackson	3703 Willow St.	Springfield	Mo.	65801	11/26/68	10:30	Service call completed.
Mr. L. Z. Keller	3						

NAME	ADDRESS	CITY	STATE	ZIP	DATE	TIME	REMARKS
Mr. J. H. Smith	123 Main St.	Springfield	Ill.	62761	10/15/68	10:30	Called to report problem with machine.
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Mr. T. E. Brown	789 Elm St.	Peoria	Ill.	61601	10/17/68	9:00	Machine not working properly.
Mr. W. D. White	321 Pine St.	Rockford	Ill.	61101	10/18/68	10:15	Service completed successfully.
Mr. C. F. Green	654 Maple St.	Decatur	Ill.	62521	10/19/68	11:30	Parts ordered for machine.
Mr. B. G. Black	987 Cedar St.	Normal	Ill.	62451	10/20/68	10:45	Machine repaired and tested.
Mr. A. J. Gray	147 Birch St.	Urbana	Ill.	62501	10/21/68	9:30	Customer satisfied with service.
Mr. S. K. Hall	258 Walnut St.	Champaign	Ill.	61821	10/22/68	11:15	Machine delivered to customer.
Mr. L. M. Young	369 Spruce St.	Carbondale	Ill.	62901	10/23/68	10:00	Service call scheduled for next week.
Mr. P. Q. King	470 Ash St.	Macomb	Ill.	61451	10/24/68	11:45	Machine working fine.
Mr. D. R. Lee	581 Hickory St.	Edwardsville	Ill.	62021	10/25/68	9:15	Customer called to check on progress.
Mr. F. T. Scott	692 Poplar St.	St. Louis	Mo.	63101	10/26/68	10:30	Machine delivered to customer.
Mr. G. U. Adams	703 Willow St.	St. Charles	Mo.	63071	10/27/68	11:00	Service call completed.
Mr. H. V. Baker	814 Cherry St.	St. Joseph	Mo.	64501	10/28/68	9:45	Machine not working.
Mr. I. W. Carter	925 Elm St.	St. Louis	Mo.	63101	10/29/68	10:15	Parts ordered for machine.
Mr. J. X. Evans	1036 Maple St.	St. Louis	Mo.	63101	10/30/68	11:30	Machine repaired and tested.
Mr. K. Y. Foster	1147 Oak St.	St. Louis	Mo.	63101	10/31/68	9:00	Customer satisfied with service.
Mr. L. Z. Grant	1258 Pine St.	St. Louis	Mo.	63101	11/01/68	10:45	Machine delivered to customer.
Mr. M. A. Harris	1369 Spruce St.	St. Louis	Mo.	63101	11/02/68	11:15	Service call completed.
Mr. N. B. Ingram	1470 Ash St.	St. Louis	Mo.	63101	11/03/68	9:30	Machine working fine.
Mr. O. C. Jackson	1581 Hickory St.	St. Louis	Mo.	63101	11/04/68	10:00	Customer called to check on progress.
Mr. P. D. Keller	1692 Poplar St.	St. Louis	Mo.	63101	11/05/68	10:30	Machine delivered to customer.
Mr. Q. E. Lewis	1703 Willow St.	St. Louis	Mo.	63101	11/06/68	11:00	Service call completed.
Mr. R. F. Miller	1814 Cherry St.	St. Louis	Mo.	63101	11/07/68	9:45	Machine not working.
Mr. S. G. Nelson	1925 Elm St.	St. Louis	Mo.	63101	11/08/68	10:15	Parts ordered for machine.
Mr. T. H. Owen	2036 Maple St.	St. Louis	Mo.	63101	11/09/68	11:30	Machine repaired and tested.
Mr. U. I. Parker	2147 Oak St.	St. Louis	Mo.	63101	11/10/68	9:00	Customer satisfied with service.
Mr. V. J. Quinn	2258 Pine St.	St. Louis	Mo.	63101	11/11/68	10:45	Machine delivered to customer.
Mr. W. K. Roberts	2369 Spruce St.	St. Louis	Mo.	63101	11/12/68	11:15	Service call completed.
Mr. X. L. Scott	2470 Ash St.	St. Louis	Mo.	63101	11/13/68	9:30	Machine working fine.
Mr. Y. M. Taylor	2581 Hickory St.	St. Louis	Mo.	63101	11/14/68	10:00	Customer called to check on progress.
Mr. Z. N. Vance	2692 Poplar St.	St. Louis	Mo.	63101	11/15/68	10:30	Machine delivered to customer.
Mr. A. O. Ward	2703 Willow St.	St. Louis	Mo.	63101	11/16/68	11:00	Service call completed.
Mr. B. P. Webb	2814 Cherry St.	St. Louis	Mo.	63101	11/17/68	9:45	Machine not working.
Mr. C. Q. Wilson	2925 Elm St.	St. Louis	Mo.	63101	11/18/68	10:15	Parts ordered for machine.
Mr. D. R. Young	3036 Maple St.	St. Louis	Mo.	63101	11/19/68	11:30	Machine repaired and tested.
Mr. E. S. Ziegler	3147 Oak St.	St. Louis	Mo.	63101	11/20/68	9:00	Customer satisfied with service.
Mr. F. T. Baker	3258 Pine St.	St. Louis	Mo.	63101	11/21/68	10:45	Machine delivered to customer.
Mr. G. U. Carter	3369 Spruce St.	St. Louis	Mo.	63101	11/22/68	11:15	Service call completed.
Mr. H. V. Evans	3470 Ash St.	St. Louis	Mo.	63101	11/23/68	9:30	Machine working fine.
Mr. I. W. Foster	3581 Hickory St.	St. Louis	Mo.	63101	11/24/68	10:00	Customer called to check on progress.
Mr. J. X. Grant	3692 Poplar St.	St. Louis	Mo.	63101	11/25/68	10:30	Machine delivered to customer.
Mr. K. Y. Harris	3703 Willow St.	St. Louis	Mo.	63101	11/26/68	11:00	Service call completed.

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Mr. T. E. Brown	789 Elm St.	Peoria	Ill.	61601	10/17/68	9:00	Machine not working properly.
Mr. W. D. White	321 Pine St.	Rockford	Ill.	61101	10/18/68	10:15	Service completed successfully.
Mr. C. F. Green	654 Maple St.	Decatur	Ill.	62521	10/19/68	11:30	Parts ordered for machine.
Mr. B. G. Black	987 Cedar St.	Normal	Ill.	62451	10/20/68	10:45	Machine repaired and tested.
Mr. A. J. Gray	147 Birch St.	Urbana	Ill.	62501	10/21/68	9:30	Customer satisfied with service.
Mr. S. K. Hall	258 Walnut St.	Champaign	Ill.	61821	10/22/68	11:15	Machine delivered to customer.
Mr. L. M. Young	369 Spruce St.	Carbondale	Ill.	62901	10/23/68	10:00	Service call scheduled for next week.
Mr. P. Q. King	470 Ash St.	Macomb	Ill.	61451	10/24/68	11:45	Machine working fine.
Mr. D. R. Lee	581 Hickory St.	Edwardsville	Ill.	62021	10/25/68	9:15	Customer called to check on progress.
Mr. F. T. Scott	692 Poplar St.	St. Louis	Mo.	63101	10/26/68	10:30	Machine delivered to customer.
Mr. G. U. Adams	703 Willow St.	St. Charles	Mo.	63071	10/27/68	11:00	Service call completed.
Mr. H. V. Baker	814 Cherry St.	St. Joseph	Mo.	64501	10/28/68	9:45	Machine not working.
Mr. I. W. Carter	925 Elm St.	St. Louis	Mo.	63101	10/29/68	10:15	Parts ordered for machine.
Mr. J. X. Evans	1036 Maple St.	St. Louis	Mo.	63101	10/30/68	11:30	Machine repaired and tested.
Mr. K. Y. Foster	1147 Oak St.	St. Louis	Mo.	63101	10/31/68	9:00	Customer satisfied with service.
Mr. L. Z. Grant	1258 Pine St.	St. Louis	Mo.	63101	11/01/68	10:45	Machine delivered to customer.
Mr. M. A. Harris	1369 Spruce St.	St. Louis	Mo.	63101	11/02/68	11:15	Service call completed.
Mr. N. B. Ingram	1470 Ash St.	St. Louis	Mo.	63101	11/03/68	9:30	Machine working fine.
Mr. O. C. Jackson	1581 Hickory St.	St. Louis	Mo.	63101	11/04/68	10:00	Customer called to check on progress.
Mr. P. D. Keller	1692 Poplar St.	St. Louis	Mo.	63101	11/05/68	10:30	Machine delivered to customer.
Mr. Q. E. Lewis	1703 Willow St.	St. Louis	Mo.	63101	11/06/68	11:00	Service call completed.
Mr. R. F. Miller	1814 Cherry St.	St. Louis	Mo.	63101	11/07/68	9:45	Machine not working.
Mr. S. G. Nelson	1925 Elm St.	St. Louis	Mo.	63101	11/08/68	10:15	Parts ordered for machine.
Mr. T. H. Owen	2036 Maple St.	St. Louis	Mo.	63101	11/09/68	11:30	Machine repaired and tested.
Mr. U. I. Parker	2147 Oak St.	St. Louis	Mo.	63101	11/10/68	9:00	Customer satisfied with service.
Mr. V. J. Quinn	2258 Pine St.	St. Louis	Mo.	63101	11/11/68	10:45	Machine delivered to customer.
Mr. W. K. Roberts	2369 Spruce St.	St. Louis	Mo.	63101	11/12/68	11:15	Service call completed.
Mr. X. L. Simmons	2470 Ash St.	St. Louis	Mo.	63101	11/13/68	9:30	Machine working fine.
Mr. Y. M. Taylor	2581 Hickory St.	St. Louis	Mo.	63101	11/14/68	10:00	Customer called to check on progress.
Mr. Z. N. Vance	2692 Poplar St.	St. Louis	Mo.	63101	11/15/68	10:30	Machine delivered to customer.
Mr. A. O. Ward	2703 Willow St.	St. Louis	Mo.	63101	11/16/68	11:00	Service call completed.
Mr. B. P. Webb	2814 Cherry St.	St. Louis	Mo.	63101	11/17/68	9:45	Machine not working.
Mr. C. Q. Wright	2925 Elm St.	St. Louis	Mo.	63101	11/18/68	10:15	Parts ordered for machine.
Mr. D. R. Young	3036 Maple St.	St. Louis	Mo.	63101	11/19/68	11:30	Machine repaired and tested.
Mr. E. S. Allen	3147 Oak St.	St. Louis	Mo.	63101	11/20/68	9:00	Customer satisfied with service.
Mr. F. T. Baker	3258 Pine St.	St. Louis	Mo.	63101	11/21/68	10:45	Machine delivered to customer.
Mr. G. U. Carter	3369 Spruce St.	St. Louis	Mo.	63101	11/22/68	11:15	Service call completed.
Mr. H. V. Evans	3470 Ash St.	St. Louis	Mo.	63101	11/23/68	9:30	Machine working fine.
Mr. I. W. Foster	3581 Hickory St.	St. Louis	Mo.	63101	11/24/68	10:00	Customer called to check on progress.
Mr. J. X. Grant	3692 Poplar St.	St. Louis	Mo.	63101	11/25/68	10:30	Machine delivered to customer.
Mr. K. Y. Harris	3703 Willow St.	St. Louis	Mo.	63101	11/26/68	11:00	Service call completed.

```

1400      1410      1420      1430      1440      1450      1460
Slit  SCKLEGGVLCDEEEDLFNPCQAICKKHGKCRLSGLGQPYCECSSGYTGDSCDREISCRGERIRDYYQ
      ::      ::      ::      ::      ::      ::      ::
325 AC-----VL-----IIFLIYKVVOFKQ---KLKA-----SENS-----RENRL-EYY-
      540      550      560      570

1470      1480      1490      1500      1510      1520
Slit  KQGYAACQTTK-KVSRLECRGGCAGGCCGGLRSKRRKYSFECTDGSSFVDEVEKVVKCGCTRCVS
      ..      :...:..:      :...:..:      :...:..:      :...:..:      :...:..:
325 ---SF---YQSARYNVVTASICNTSPNSLESPPGLEQIRLHK-----QIVPENEAQVI-LFEHSAL
      580      590      600      610      620

```

Fig. 5L

```
10      20      30      40      50      60      70
Slit  CAGAGCAGGTTGGAGAGGGCGTGGGAGGCGTGTGCCTGAGTGGGCTCTACTGCCCTTGTTCATATTATT
325  -----

      80      90      100     110     120     130     140
Slit  TTGTGCACATTTTCCCTGGCACTCTGGGTTGCTAGCCCCGCCGGCACTGGGCCCTCAGACACTGCGCGGT
325  -----

150     160     170     180     190     200     210
Slit  TCCCTCGGAGCAGCAAGCTAAAGAAAGCCCCCAGTGCCGGCGAGGAAGGAGCGCGGGGAAAGATGCGC
325  -----

220     230     240     250     260     270     280
Slit  GCGGTTGGCTGGCAGATGCTGTCCCTGTCCGCTGGGTTAGTGCTGGCGATCCTGAACAAGGTGGCACCCGC
      ::::
325  -----GTCG-----ACCC-----
```

Fig. 5Mi

290 300 310 320 330 340 350
 Slit AGCGTGCCCGGCAGTGCTTGTCTGGGCAGCACAGTGGACTGTACGGGCTGGCGCTGGCGACGCT
 325 -----CACG-----CGT
 10

360 370 380 390 400 410 420
 Slit GCCCAGGAATATCCCCGCAACCCGAGAGACTGGATTAAATGGAAATAACATCACAGAATTACGAAG
 :.:.:.:.:.:
 325 --CCGGAATGTC-----
 20

430 440 450 460 470 480 490
 Slit ACAGATTTGCTGGTCTTAGACATCTAAGAGTTCTTCAGCTTATGGAGAATAAGATTAGCACCATTTGAAA
 :.:.:.:.:.:
 325 -----GTTCTTCAGATTAAAGAAAAA-----CCTTTA-----
 30 40 50

500 510 520 530 540 550 560
 Slit GAGGAGCATTCAGGATCTTAAAGAACTAGAGAGACTGCGTTTAAACAGAAATCACCTTCAGCTGTTTCC
 :.:.:.:.:.:
 325 -----CTGAATC-----AGCT-GAGTG-----TTAAT---AATACG-----AATTTC
 60 70 80

Fig. 5Mii

```

570      580      590      600      610      620      630
Slit  TGAGTTGCTGTTCTTGGGACTGCCAAGCTATACAGGCTTGATCTCAGTGAACCAAAATTCAGGCAATC
:      :      :      :      :      :      :
325  T-----TTTCTTG--C--CAATTCTGATCTGA-----ACAGA-AAATCCAAGAACAGG-----
          90          100          110          120          130

640      650      660      670      680      690      700
Slit  CCAAGGAAAGCTTCCGTTGGGCAGTTGACATAAAAAATTGCAACTGGATTACAACCAGATCAGCTGTA
:      :      :      :      :      :      :
325  -----GATATGTG-----TGGATTACA-----GTT
          140          150

710      720      730      740      750      760      770
Slit  TTGAAGATGGGGCATTCAGGGCTCTCCGGGACCTGGAAGTGTCTCACTCTCAACAATAACAACATTACTAG
:      :      :      :      :      :      :
325  TT-----CTCT-----GCCT-----TGC-----CTACGA-----
          160          170

780      790      800      810      820      830      840
Slit  ACTTCTGTGGCAAGTTTCAACCATAATGCCCTAAACTTAGGACTTTTCGACTGCATTCAAAACAACCTGTAT
:      :      :      :      :      :      :
325  -----CTGTTTCTGGTTGTTACCTGTTA-----TCTTTT-----AT
          180          190          200

```

Fig. 5Miii

[illegible]

Fig. 5Miv


```

1130      1140      1150      1160      1170      1180      1190
Slit GTTTGGAACAGAACAAATCAAAGTCATCCCTCTGGAGCTTTCTCACCATAATAAAAGCTTAGACGAAT
      :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: ::
325 ---TGTATCTGA-----CTGGGAATAATATATCTTATATATAAATGAAAGT-GAAT
      330      340      350      360      370

1200      1210      1220      1230      1240      1250      1260
Slit TGACCTGAGCAATAATCAGATCTCTGAACTTGCACCAGATGCTTTCCAAGGACTACGCTCTCTGAATTCA
      :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: ::
325 TAAC-----AGGACTTC-----ATTCT
      380

1270      1280      1290      1300      1310      1320      1330
Slit CTTGTCTCTATGGAAATAAAATCACAGAACTCCCCAAAGTTTATTGAAGGACTGTTTTCCTTACAGC
      :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: ::
325 CTTGT-----AGC-----ATTGTATTGGA-----TAATTCTAACA--
      390      400      410      420

1340      1350      1360      1370      1380      1390      1400
Slit TCCTATTATTGAATGCCAACAAAGATAAACTGCCCTTCGGGTAGATGCTTTTCAGGATCTCCACAACCTTGAA
      : :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: ::
TTCTGTATGTATAT-CCAAAA-----GCCTTTG-----TTCAATTGAGG-----CATCTATAT
      430      440      450      460

```

Fig. 5Mv

490

530

5

0595

Fig. 5Mvi

600

620

055

570

Fig. 5Mvii

```

1970      1980      1990      2000      2010      2020      2030
Slit AAATACTTCTTACGAGTAATCGTTTGGAAAATGTGCAGCATAAGATGTTCAAGGGATTGGAAGCCTCAA
      :::::      :: :::::
325 --ATACTT-----GATTATC-----A
      690

2040      2050      2060      2070      2080      2090      2100
Slit AACTTTGATGTTGAGAAGCAATCGAATAACCTGTGTGGGAATGACAGTTTCATAGGACTCAGTCTCTGTG
      :::
      :::::      :: :::::
325 AAC-----ATAAC--ATTTGAGGATATCAGAATCAG-----
      700      710      720

2110      2120      2130      2140      2150      2160      2170
Slit CGTTTGCTTTCTTTGTATGATAATCAAAATTACTACAGTTGCACCAGGGCAATTGATACTCTCCATTCTT
      :::::
      :GCTTTC-----
      730

2180      2190      2200      2210      2220      2230      2240
Slit TATCTACTCTAAACCTCTTGGCCAATCCTTTTAACTGTAACTGCTACCTGGCTTGGTTGGGAGAGTGGCT
      :: :::::      :::::
      AACATCTTGA--AAACCTT-----GCTTGTGTTGTAT-----T
      740      750      760

```

Fig. 5Mviii

Slit
325

	2320	2330	2340	2350	2360	2370	2380
CAGGATGTGCCATT CAGGACTTCACTTGTCACCGAAATGATACAATA GTGTC TCCCCACTTT CTC							
:: :::::				: : : : :	:	:	:
TAAAAGTC TT-----AGA GACTTT-----C TTTGTCTC							
	820				830		840

```

2460      2470      2480      2490      2500      2510      2520
Slit  GAAAGGTATTCCAAGAGATGTCACAGAGTTGTATCTGGATGGAACCAATTTACACTGGTTCCCAAGGAA
      ..
325 AA-----TCTGGA--ATACC-----TCC-----
                                900

```

Fig. 5Mix

```

2740      GGTGCTTCAATGATCTTTCGATTATCACATCTAGCAATTGGAGCCAACCTCTTTACTGTGATTGTA
Slit      :      :      :      :      :      :      :      :      :      :      :      :
325 G----TTAGATAGAA---ACAGAATAAT-----TAGCATT-----GATAATGAT
          1060          1070          1080

```

Fig. 5Mx

```

2810      2820      2830      2840      2850      2860      2870
Slit ACATGCAGTGGTTATCCGACTGGGTGAAGTCGGAATATAAGGAGCCTGGAATTGCTCGTTGTGCTGGTCC
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
325 ACAT-----TTGAAAAATATGGGAGCAT-----CTTTGAA--GATCC
1090      1100      1110      1120

2880      2890      2900      2910      2920      2930      2940
Slit TGGAGAAATGGCAGATAAACTTTTACTCACAACTCCCTCCAAAAAATTACCTGTCAAGGTCCTGTGGAT
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
325 T-----TAATCTGTCAT-----
      1130

2950      2960      2970      2980      2990      3000      3010
Slit GTCAATATTCTAGCTAAGTGTAACCCCTGCCTATCAAATCCGTGTAAAAAATGATGGCACATGTAATAGTG
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
325 -TTAATAAATCTTACA-----GCCTTGC--ATCCAAG-----G
1140      1150      1160

3020      3030      3040      3050      3060      3070      3080
Slit ATCCAGTTGACTTTTACCGATGCACCTGTCCATATGGTTTCAAGGGCAGGACTGTGATGTCCCAATTCA
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
325 GTCC-----TTAAGCCGT-----TGTC-----TTCATTG-----ATTCA
1170      1180      1190

```

Fig. 5Mxi

```

3090      3100      3110      3120      3130      3140      3150
Slit  TGCCTGCATCAGTAACCCATGTAAACATGGAGAACTTGCCACTTAAAGGAGAGAAAGATGGATTTC
:      :::::      :::::      :      :      :      :      :
325 T-----CTTCAGG-----CAAATT-----CTAATC-CTT-----GGGAATGTAAGTGCAGAAAC
1200                                1210      1220      1230

3160      3170      3180      3190      3200      3210      3220
Slit  TGGTGATTTGTGCTGATGGATTGGAAGGAGAGAAAATTGTGAAGTCAACGTTGATGATTGTGAAGATAATG
:      :::::      :      :      :      :      :
325 T-----TTTGGGC-----CTTCGA-----G
1240

3230      3240      3250      3260      3270      3280      3290
Slit  ACTGTGAAAATAATTCTACATGTGTGCGATGGCATTAAATACTACACATGCCTTTGCCACCTGAGTATAC
:      :::::      :      :      :      :      :
325 ACTG-----GC-----TAGCAT-----CTTCA---GCCATTAC-----
1250                                1260      1270

3300      3310      3320      3330      3340      3350      3360
Slit  AGGTGAGTTGTGTGAGGAGAAAGCTGGACTTCTGTGCCAGGACCTGAACCCCTGCCAGCACGATTCAAAG
:      :::::      :      :      :      :      :
325 -----TCTAAACATCTATT-----GTCAGAAATCCCC-----
1280                                1290

```

Fig. 5Mxii

1320

1350

1380

1430

Fig. 5Mxiii

```

3650      3660      3670      3680      3690      3700      3710
Slit AGTGTTCCTGGCTATCAGGAGAAAAGTGTGAAAATTGGTTAGTGTGAATTTTATAACAAAGAGTC
    ::      ::      ::      ::      ::      ::      ::
325 AGT-----CCT--CT-----GGAAAATACTGAGAC-----TGAGAACATTACTTTCTCTGGGAA--
1460      1470      1480      1490      1500

3720      3730      3740      3750      3760      3770      3780
Slit TTATCTTCAGATTCCCTTCAGCCCAAGGTTCCGGCCTCAGACGGAACATAACACTTCAGATTGCCACAGATGAA
    ::      ::      ::      ::      ::      ::      ::
325 -----CGAATTCCCTAC-----TTCACCTGCTGGTAGA-TTTTTTCAAGAGAATGCCCTTTGGTAA-
1510      1520      1530      1540      1550

3790      3800      3810      3820      3830      3840      3850
Slit GACAGCGGAATCCCTCTGTATAAGGGTGACAAAGACCATAATCGCGGTAGAACTCTATCGGGGCGGTGTC
    ::      ::      ::      ::      ::      ::      ::
325 -----TCCATT-----GAGACTA-----CA----GCAGTGTAC-CTGT-----GCAAATAC
1560      1570      1580      1590

3860      3870      3880      3890      3900      3910      3920
Slit GTGCCAGCTATGACACCGGCTCTCATCCAGCTTCTGCCATTACAGTGTGGAGACAATCAATGATGGAAA
    ::      ::      ::      ::      ::      ::      ::
325 AA-CTTACTA-----CTTCTGTTACCTTGAAC-----TGGAATAAACAGTGCT-----
1600      1610      1620      1630

```

Fig. 5Mxiv

```

4000      4010      4020      4030      4040      4050      4060
Slit ATCATCACTAACTTGTCAAAGCAGTCCACTCTGAATTTTGACTCTCCACTCTATGTAGGAGCATGCCAG
      :.:.:.:.:.:.:.:.:.:.:.:.:.:.:.:.:.:.:.:.:.:.:.:.:.:.:.:.:.:.:.:.:.:.:
325 AACATCTCTAATTGTT-----ACACAAGAAGTTGA-----
1670      1680      1690

```

```

4140      4150      4160      4170      4180      4190      4200
Slit  GAACCTTTACATCAACAGTGAGCTGCAGGACTTCCAGAAAGTGCCGATGCAAAACAGGCATTTTGCCCTGGC
325  -----TTTTCATC-----TTAGCTT-----GTG-----TTTAAATCATTT-----
      1740      1750      1760

```

Fig. 5Mxv

```

4210      TGTGAGCCATGCCACAAGAAGTGTGTGCCCATGGCACATGCCAGCCAGCAGGCTTCACCT
Slit      :   :   :   :   :   :   :   :   :   :   :   :   :   :   :   :
325      TTTGATC--TAC-----AAAGTTGTT-----CAGTTTA---A
          1770          1780          1790

```

[illegible]

```

4350      4360      4370      4380      4390      4400      4410
Slit  ATCGTACATGGCACCTGCTTGCCCATCAATGCGTTCTCCTACAGCTGTAAGTCTTGAGGGCCATGGA
      :  :  :  :  :  :  :  :  :  :  :  :  :  :  :  :  :  :  :  :  :  :  :  :
325  AGACTTGAATA-CTACAGCTT-----TTATCAGTCAGCAAGGTATA-----ATGTA
1830      1840      1850      1860      1870

```

```

4420      4430      4440      4450      4460      4470      4480
Slit  GGTGTCCTCTGTGATGAAGAGGAGGATCTGTTTAACCCATGCCAGCGCATCAAGTGCAAGCACGGGAAGT
      .  ::  :::::  :::  ::::  :::  :::  :::  :::  :::  :::  :::  :::  :::  :::  :::  :::  :::
325  ACTG-CCTCAAT-TTG-----TAACACTTCCC-----CAAATTCT--CT-AGAAAGT
      1880              1890              1900              1910

```

Fig. 5Mxvi

	4560	4570	4580	4590	4600	4610	4620
Slit	AGAAATCTCTTGT	CGAGGGAAGGATA	AAGAGATTATTAC	CAAAAGCAGGGCT	ATGCTGCTTGCCAA		
	:	:	:
325	AATTGT-TC----	C-----	TGAAAATGAG--	-----	GCA-CAGGTC-AT	TCTTTTGTG----	A
1950			1960		1970	1980	

```

4630      ACAACCAAGGTTCCCGATTAGAGTGCAGAGTGGTGTGCAGGAGGCAGTCTGTGGACCGCTGA
Slit      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
325 ACATTC-----TGCTTTATAACTC-----
1990
2000

```

	4700	4710	4720	4730	4740	4750	4760
Slit	GGAGCAAGCGGGAAATACTCTTCGAATGCAC	TGACGGCTCCTTGTGGACGAGTTGAGAAAGT					
	:...:	:...:	:...:	:...:	:...:	:...:	:...:
325	--AACTAA-----ATATTGTCTATAAGAAACT---	TCAGTGCCA-----TGGACATGATTTAA-----					
	2010	2020	2030	2040	2050		

Fig. 5Mxvii

```

4770      4780      4790      4800      4810      4820      4830
Slit  GGTGAAGTGGGGCTGTACGAGGTGTGTCTTAACACACTCCCGGAGCTCTGTCTTTGGAAAAGTTG
      ::::
325  -----CTG-----AAAC-----CTC-----CTT-----ATATAATTA
      2060      2070

4840      4850      4860      4870      4880      4890      4900
Slit  TATACTTGTGACCATGTGGGACTAATGAATGCTTCATAGTGGAAATATTTGAAATATATTTGTAATAATAC
      :::::
325  TATACTT-TAGT---TGGAAATATAATGAATTATATGAGGTTAGCATTATTAAATAATGTTTTTAA-----
      2080      2090      2100      2110      2120      2130

4910      4920      4930      4940      4950
Slit  AGAACAGACTTATTTTATTATGAGAAATAAAGACTTTTTTTCTGCATTG
      :::::
325  -----TAAAAAATAAATAAATAAAGGCG-----GCCGC-----
      2140      2150      2160

```

Fig. 5Mxviii

ACGGTCCGCACANGCCGGCGGCTGGAGCGGGTGGCGCGCGGGAGCGGAGCACGGCCGAGGACCTGGA	79
M R L P R R A A L G L	
GCTCCGGCTGCGTCTTCCCGCAGCGCTACCCGCC ATG CGC CTG CCG CGC CGG GCC GCG CTG GGG CTC	111
	146
L P L L L L L P P A P E A A K K P T P C	31
CTG CCG CTT CTG CTG CTG CCG CCC GCG GAG GCC AAG AAG CCG ACG CCC TGC	206
H R C R G L V D K F N Q G M V D T A K K	51
CAC CGG TGC CGG GGG CTG GTG GAC AAG TTT AAC CAG GGG ATG GTG GAC ACC GCA AAG AAG	266
N F G G G N T A W E E K T L S K Y E S S	71
AAC TTT GGC GGC AAC ACG GCT TGG GAG GAA AAG ACG CTG TCC AAG TAC GAG TCC AGC	326
E I R L L L E I L L E G L C E S S D F E C N	91
GAG ATT CGC CTG CTG GAG ATC CTG GAG GGG CTG TGC GAG AGC AGC GAC TTC GAA TGC AAT	386
Q M L E A Q E E H L E A W L Q L K S E	111
CAG ATG CTA GAG GCG CAG GAG GAG CAC CTG GAG GCG TGG TGG CTG CAG CTG AAG AGC GAA	446
Y P D L L F E W F C V K T L K V C C S P G	131
TAT CCT GAC TTA TTC GAG TGG TTT TGT GTG AAG ACA CTG AAA GTG TGC TGC TCT CCA GGA	506

Fig. 6A

T	Y	G	P	D	C	L	A	C	Q	G	G	S	Q	R	P	C	S	G	N	151
ACC	TAC	GGT	CCC	GAC	TGT	CTC	GCA	TGC	CAG	GGC	GGA	TCC	CAG	AGG	CCC	TGC	AGC	GGG	AAT	566
G	H	C	S	G	D	G	S	R	Q	G	D	G	S	C	R	C	H	M	G	171
GGC	CAC	TGC	AGC	GGA	GAT	GGG	AGC	AGA	CAG	GGC	GAC	GGG	TCC	TGC	CGG	TGC	CAC	ATG	GGG	626
Y	Q	G	P	L	C	T	D	C	M	D	G	Y	F	S	S	L	R	N	E	191
TAC	CAG	GGC	CCG	CTG	TGC	ACT	GAC	TGC	ATG	GAC	GGC	TAC	TTC	AGC	TCG	CTC	CGG	AAC	GAG	686
T	H	S	I	C	T	A	C	D	E	S	C	K	T	C	S	G	L	T	N	211
ACC	CAC	AGC	ATC	TGC	ACA	GCC	TGT	GAC	GAG	TCC	TGC	AAG	ACG	TGC	TCG	GGC	CTG	ACC	AAC	746
R	D	C	G	E	C	E	V	G	W	V	L	D	E	G	A	C	V	D	V	231
AGA	GAC	TGC	GGC	GAG	TGT	GAA	GTG	GGC	TGG	GTG	CTG	GAC	GAG	GGC	GCC	TGT	GTG	GAT	GTG	806
D	E	C	A	A	E	P	P	P	C	S	A	A	Q	F	C	K	N	A	N	251
GAC	GAG	TGT	GCG	GCC	GAG	CCG	CCT	CCC	TGC	AGC	GCT	GCG	CAG	TTC	TGT	AAG	AAC	GCC	AAC	866
G	S	Y	T	C	E	E	C	D	S	S	C	V	G	C	T	G	E	G	P	271
GGC	TCC	TAC	ACG	TGC	GAA	GAG	TGT	GAC	TCC	AGC	TGT	GTG	GGC	TGC	ACA	GGG	GAA	GGC	CCA	926
G	N	C	K	E	C	I	S	G	Y	A	R	E	H	G	Q	C	A	D	V	291
GGA	AAC	TGT	AAA	GAG	TGT	ATC	TCT	GGC	TAC	GCG	AGG	GAG	CAC	GGA	CAG	TGT	GCA	GAT	GTG	986

Fig. 6B

D	E	C	S	L	A	E	K	T	C	V	R	K	N	E	N	C	Y	N	T	311	
GAC	GAG	TGC	TCA	CTA	GCA	GAA	AAA	ACC	TGT	GTG	AGG	AAA	AAC	GAA	AAC	TGC	TAC	AAT	ACT	1046	
P	G	S	Y	V	C	V	C	P	D	G	F	E	E	T	E	D	A	C	V	331	
CCA	GGG	AGC	TAC	GTC	TGT	GTG	TGT	CCT	GAC	GGC	TTC	GAA	GAA	ACG	GAA	GAT	GCC	TGT	GTG	1106	
P	P	A	E	A	E	A	T	E	G	E	S	P	T	Q	L	P	S	R	E	351	
CCG	CCG	GCA	GAG	GCT	GAA	GCC	ACA	GAA	GGA	GAA	AGC	CCG	ACA	CAG	CTG	CCC	TCC	CGC	GAA	1166	
D	L	*																		354	
GAC	CTG	TAA																		1175	
TGT	GCC	GACT	TAC	CTT	TAA	ATT	ATTC	AGA	AGG	ATG	TCCC	GTG	AAA	ATGT	GCCC	CTG	AGG	ATGCC	GTC	CTGCAGT	1254
GGAC	AGCG	GGG	GAG	AGG	CTG	CTCT	CTCT	CTA	ACG	GTG	ATT	CTCAT	TTGT	CCCC	TTAA	ACAG	CTGC	ATTCT	TGGTTG	1333	
TTCT	TAA	ACAG	ACT	TGT	ATAT	TTT	GAT	ACAG	TCT	TTT	GTAA	TAAAA	ATTG	ACC	ATTG	AGG	TAATC	AAAA	AAAA	AAAA	1412
AAAA	AGG	CGG	CGC	GCT	AGAC															1432	

Fig. 6C

003#36 16736560

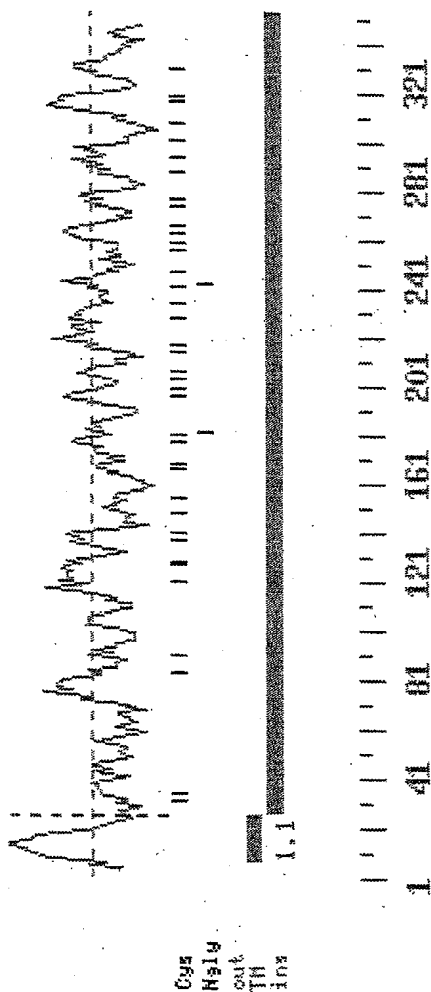


Fig. 6D

Fig. 6E

```

10      20      30      40      50
C --GTAGCCGGG--GGAACGGC-CGGC-----GCGCTTG-----CCGGTGGCGGAGCGGAGACT-CCACA
: . : : . . : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
H ACGCGTCCGCACANGCCCGCGCGGCTGGGAGCGGGTGGGCGCGGAGCGGAGCGGAGCAGCAGCAGCGCGCA
10      20      30      40      50      60      70

60      70      80      90      100      110
C G---CAGTT-CTC-TGCCG-GTCG-CCCGCGAGTGC-ACCCGCCCATGCACCTGCCGC-CCGCTGCCGCAG
: . : . : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
H GGACCTGGAGCTCCGGCTGCGCTCTTCCCGC-AGCGCTACCCGCCCATGCGCCTGCCGCGCGC-GGCCGCGC
80      90      100      110      120      130

120      130      140      150      160      170      180
C TCGGGCT---GCTACTGCTGCTGCTGCCGCCCTCCCGCGCGGTGGCCTCCCGGAAGCCGACAATGTGCCA
: : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
H TGGGGCTCCTGCCGCTTCTGCTGCTGCTGCCGCCCGCGCGGAGCGCCCAAGAACGCGACGCCCTGCCA
140      150      160      170      180      190      200

190      200      210      220      230      240      250
C GAGGTGCCGGCGGCTGGTGGACAAGTTCAACCAGGGGATGCCAACACAGGCCAGGAAGAATTTCGGCGGC
: : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
H CCGGTGCCGGCGGCTGGTGGACAAGTTTAACCAGGGGATGGTGGACACCGCAAGAAAGAACTTTGGCGGC
210      220      230      240      250      260      270

```

Fig. 6F

Fig. 6G

```

540      550      560      570      580      590      600
C AGCGGAATGCCACTGCGACGGAGATGGCAGCAGACAGGGCGGTCCTGCCAGTGTACGTAGGAT
   ::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
H AGCGGAATGCCACTGCGACGGAGATGGGAGCAGACAGGGCGGTCCTGCCGGTGCCACATGGGGT
560      570      580      590      600      610      620

610      620      630      640      650      660      670
C ACAAGGGCCGCTGTGTATCGACTGCATGGATGGCTACTTCAGCTTGCTGAGGAACGAGACCCACAGCTT
   ::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
H ACCAGGCCCGCTGTGCACTGACTGCATGGACGGCTACTTCAGCTCGCTCCGGAACGAGACCCACAGCAT
630      640      650      660      670      680      690

680      690      700      710      720      730      740
C CTGCACAGCCTGTGATGAGTCCTGCAAGACATGCTCAGGTCCAACCAAGAGCTGTGTGGAGTGCAGAA
   ::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
H CTGCACAGCCTGTGACGAGTCCTGCAAGACGCTGCTCGGCCCTGACCAACAGAGACTGCGGCGAGTGTGAA
700      710      720      730      740      750      760

750      760      770      780      790      800      810
C GTGGGCTGGACACGCTGTGGAGGATGCCCTGTGTGGATGTTGACGAGTGTGCAGCAGAGACCCACCCCTGCA
   ::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
H GTGGGCTGGTGTGGACGAGGGCGCCTGTGTGGATGTGGACGAGTGTGCGGCCGAGCCGCTCCCTGCA
770      780      790      800      810      820      830

```

Fig. 6H

Fig. 61

Fig. 6J

GTCGACCCACGGTCCGTCTCTGGGCCCCAGCCCTCTCTCAGCTCGGCGCAGTCTCCGGCCGAGTCTCAGCTGCAGCTG	79
CAGGACTGAGCCCGTGACACCCGGAGAGACCCCCGGAGGAGCGGACAAACTTCGAGTGCCGCGGACCCCAACCCAGCCCT	158
GGGTAGCCTGCAGC ATG GCC CAG CTG TTC CTG CCC CTG CTG GCA GCC CTG GTC CTG GCC CAG	16 220
A P A A L A D V L E G D S S E D R A F R	36 280
GCT CCT GCA GCT TTA GCA GAT GTT CTG GAA GGA GAC AGC TCA GAG GAC CGC GCT TTT CGC	
V R I A G D A P L Q G V L G G A L T I P	56 340
GTG CGC ATC GCG GGC GAC GCG CCA CTG CAG GGC GTG CTC GGC GGC CTC ACC ATC CCT	
C H V H Y L R P P P S R R A V L G S P R	76 400
TGC CAC GTC CAC TAC CTG CGG CCA CCG CCG AGC CGC CGG GCT GTG CTG GGC TCT CCG CGG	
V K W T F L S R G R E A E V L V A R G V	96 460
GTC AAG TGG ACT TTC CTG TCC CGG GGC CGG GAG GCA GAG GTG CTG GTG GCG CGG GGA GTG	
R V K V N E A Y R F R V A L P A Y P A S	116 520
CGC GTC AAG GTG AAC GAG GCC TAC CGG TTC CGC GTG GCA CTG CCT GCG TAC CCA GCG TCG	
L T D V S L A L S E L R P N D S G I Y R	136 580
CTC ACC GAC GTC TCC CTG GCG CTG AGC GAG CTG CGC CCC AAC GAC TCA GGT ATC TAT CGC	

Fig. 7A

C	E	V	Q	H	G	I	D	S	S	D	A	V	E	V	K	V	K	G	156	
TGT	GAG	GTC	CAG	CAC	CAC	GAT	GAC	AGC	AGC	GAC	GCT	GTG	GAG	GTC	AAG	GTC	AAA	GGG	640	
V	V	F	L	Y	R	E	G	S	A	R	Y	A	F	S	F	S	G	A	Q	176
GTC	GTC	TTT	CTC	TAC	CGA	GAG	GGC	TCT	GCC	CGC	TAT	GCT	TTC	TCC	TTT	TCT	GGG	GCC	CAG	700
E	A	C	A	R	I	G	A	H	I	A	T	P	E	Q	L	Y	A	A	Y	196
GAG	GCC	TGT	GCC	CGC	ATT	GGA	GCC	CAC	ATC	GCC	ACC	CCG	GAG	CAG	CTC	TAT	GCC	GCC	TAC	760
L	G	G	Y	E	Q	C	D	A	G	W	L	S	D	Q	T	V	R	Y	P	216
CTT	GGG	GGC	TAT	GAG	CAA	TGT	GAT	GCT	GGC	TGG	CTG	TCG	GAT	CAG	ACC	GTG	AGG	TAT	CCC	820
I	Q	T	P	R	E	A	C	Y	G	D	M	D	G	F	P	G	V	R	N	236
ATC	CAG	ACC	CCA	CGA	GAG	GCC	TGT	TAC	GGA	GAC	ATG	GAT	GGC	TTC	CCC	GGG	GTC	CGG	AAC	880
Y	G	V	V	D	P	D	D	L	Y	D	V	Y	C	Y	A	E	D	L	N	256
TAT	GGT	GTG	GTG	GAC	CCG	GAT	GAC	CTC	TAT	GAT	GTG	TAC	TGT	TAT	GCT	GAA	GAC	CTA	AAT	940
G	E	L	F	L	G	D	P	P	E	K	L	T	L	E	E	A	R	A	Y	276
GGA	GAA	CTG	TTC	CTG	GGT	GAC	CCT	CCA	GAG	AAG	CTG	ACA	TTG	GAG	GAA	GCA	CGG	GCG	TAC	1000
C	Q	E	R	G	A	E	I	A	T	T	G	Q	L	Y	A	A	W	D	G	296
TGC	CAG	GAG	CGG	GGT	GCA	GAG	ATT	GCC	ACC	ACG	GGC	CAA	CTG	TAT	GCA	GCC	TGG	GAT	GGT	1060

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Fig. 7B

G	L	D	H	C	S	P	G	W	L	A	D	G	S	V	R	Y	P	I	V	316
GGC	CTG	GAC	CAC	TGC	AGC	CCA	GGG	TGG	CTA	GCT	GAT	GGC	AGT	GTG	CGC	TAC	CCC	ATC	GTC	1120
T	P	S	Q	R	C	G	G	G	L	P	G	V	K	T	L	F	L	F	P	336
ACA	CCC	AGC	CAG	CGC	TGT	GGT	GGG	GGC	TTG	CCT	GGT	GTC	AAG	ACT	CTC	TTT	CTC	TTC	CCC	1180
N	Q	T	G	F	P	N	K	H	S	R	F	N	V	Y	C	F	R	D	S	356
AAC	CAG	ACT	GGC	TTC	CCC	AAT	AAG	CAC	AGC	CGC	TTC	AAC	GTC	TAC	TGC	TTT	CGA	GAC	TCG	1240
A	Q	P	S	A	I	P	E	A	S	N	P	A	S	N	P	A	S	D	G	376
GCC	CAG	CCT	TCT	GCC	ATC	CCT	GAG	GCC	TCC	AAC	CCA	GCC	TCC	AAC	CCA	GCC	TCT	GAT	GGA	1300
L	E	A	I	V	T	V	T	E	T	L	E	E	L	Q	L	P	Q	E	A	396
CTA	GAG	GCT	ATC	GTC	ACA	GTG	ACA	GAG	ACC	CTG	GAG	GAA	CTG	CAG	CTG	CCT	CAG	GAA	GCC	1360
T	E	S	E	S	R	G	A	I	Y	S	I	P	I	M	E	D	G	G	G	416
ACA	GAG	AGT	GAA	TCC	CGT	GGG	GCC	ATC	TAC	TCC	ATC	CCC	ATC	ATG	GAG	GAC	GGA	GGA	GGT	1420
G	S	S	T	P	E	D	P	A	E	A	P	R	T	L	L	E	F	E	T	436
GGA	AGC	TCC	ACT	CCA	GAA	GAC	CCA	GCA	GAG	GCC	CCT	AGG	ACG	CTC	CTA	GAA	TTT	GAA	ACA	1480
Q	S	M	V	P	P	T	G	F	S	E	E	E	G	K	A	L	E	E	E	456
CAA	TCC	ATG	GTA	CCG	CCC	ACG	GGG	TTC	TCA	GAA	GAG	GAA	GGT	AAG	GCA	TTG	GAG	GAA	GAA	1540

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Fig. 7C

[illegible]

Fig. 7D

R	T	A	P	A	G	T	S	V	Q	A	Q	P	V	L	P	T	D	S	A	636		
AGA	ACT	GCC	CCA	GCA	GGG	ACC	TCA	GTG	CAG	GCC	CAG	CCA	GTG	CTG	CCC	ACT	GAC	AGC	GCC	2080		
S	R	G	G	V	A	V	V	P	A	S	G	N	S	A	Q	G	S	T	A	656		
AGC	CGA	GGT	GGA	GTG	GCC	GTG	GTC	CCC	GCA	TCA	GGT	AAT	TCT	GCC	CAA	GGC	TCA	ACT	GCC	2140		
L	S	I	L	L	L	F	F	P	L	Q	L	W	V	T	*					672		
CTC	TCT	ATC	CTA	CTC	CTT	TTC	TTC	CCC	CTG	CAG	CTC	TGG	GTC	ACC	TGA					2188		
CCT	GTAG	TCCTT	TAACCC	ACC	CAT	CAT	CCCA	AACT	CTC	CTCT	GTCC	TTTG	CCCTT	CTCT	CTT	ACCC	ACCT	CT	TACCT	ATGGG	2267	
TCT	CCAAT	CTCG	ATAT	CCAC	CTT	GTGG	GTAT	CTC	AGCT	CTC	CCGCGT	CTTT	ACCC	TGT	GAT	CCCC	CAGC	CCCC	CCACT	GTAC	2346	
CAT	CTGT	GACCC	TTCC	CTGCC	ATTGG	GGCC	CTCC	ACCT	GTGG	CTC	ACAT	CTCG	CCAG	CCCC	ACAG	AGCAT	CCTC	CAGG	CCCT		2425	
CTC	CAAG	GGT	CCTC	ATC	ACCT	ATTG	CAGC	CTT	CAGG	CTCG	GCCT	ATTT	TCC	ACT	ACT	CCCTT	CAT	CCG	CCT	GTGT	2504	
GT	CCCC	TTAG	CTGCC	TCCT	ATTG	ATCT	CAGG	GAAG	CCCTG	GAGT	CCCTT	CTC	ACCC	CTC	CAAC	CTCC	GAGT	CCAG	GAG		2583	
A	ACCC	GTAC	CCCC	ACAG	AGC	CTTA	AGCA	AACT	ACTT	CTGT	GAAG	TATTT	TTG	ACT	GTTT	CATG	GAA	ACA	AGC	CTT	2662	
A	ATAA	ATCT	CTAT	TAA	ACCG	CTTT	GTAA	CCAAAA	AAAA	AAAA	AAAA	AAAA	AAAA	AAAA	AAAA	AAAA	AAAA	AAAA	AAAA	GGG	CGCCG	2730

Fig. 7E

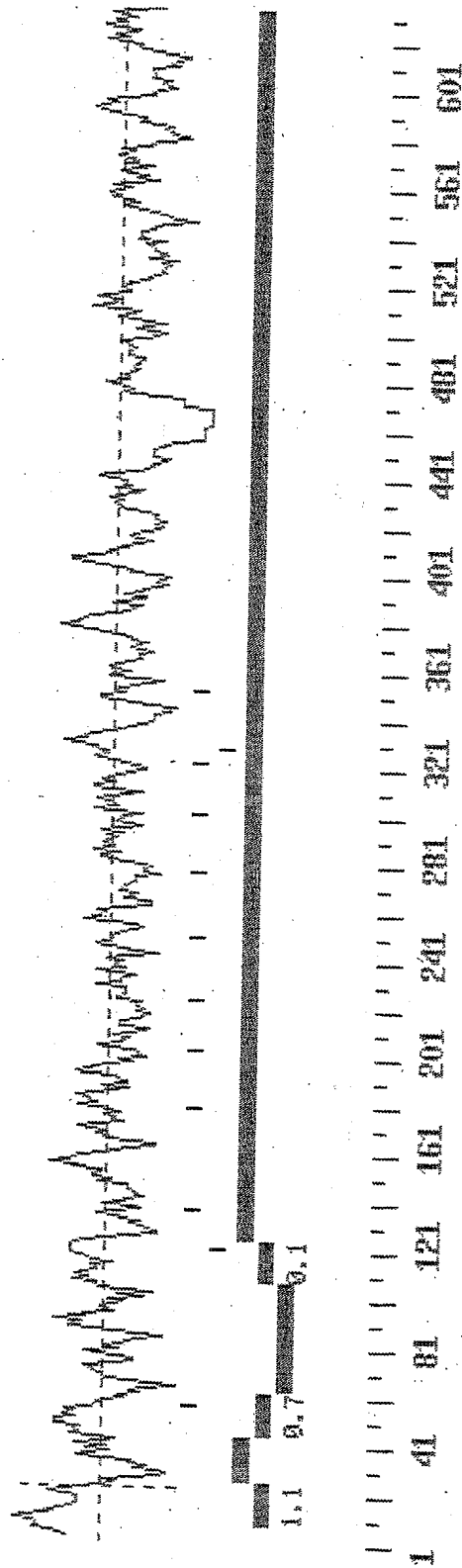


Fig. 7F

Fig. 7G

Fig. 7H

Fig. 7I

Fig. 7J

```

680      690      700      710      720      730      740
M GACYKHSTRRSWEEAESQCRALGAHLTISICTPEEQDFVNDRYEQWIGLNDRTIEGDFLWSDGAPLLY
H -----SI-----L-----LLF
      660

750      760      770      780      790      800      810
M ENWNPQDPSYFLSGENCVMVWHDQGWSDVPCNYHLSYTKMGLVSCGPPQLPLAQIFGRPRLRYAV
      :
      F-----PLQ-----
H -----

820      830      840      850      860      870      880
M DTVLYRCRDGLAQRNLPLIRCQENGLWEAPQISCVPRRPGRALRSMDAPEGPRGQLSRHRKAPLTTPSS
      :
      LWVT-----
H -----
      670

```

M L

H -

Fig. 7K

```

10      20      30      40      50
H  GTCG-ACCCA-CG-----CGTCC-----GTCCTGGGCCCCAGCCTCTCCTCAGCTCGCGCAGTC
.. : ::::: :: : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
M  GAGGCTCCCGGCGAGCTGGCGCCCCCTGTCTGGGTCCCGCGCGCCCCGGCC-CTGCTCGCGCCCCGCGCA-TC
10      20      30      40      50      60

60      70      80      90      100     110     120
H  TCCGCCGCGAGTCTCAG-CTGCAGCTGCAGGACTGAGCCGTGCACCCGGAGGAGACCCCGGAGGAGGCGGA
: : ::::: :: : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
M  GC-GCCGCGAGTCTCGGTCTGCGGCTGCGGACGTGACGGCGTGC GCGGAGGGGACCTC-----GCAA
70      80      90      100     110     120

130     140     150     160     170     180     190
H  CAAACTTCGCAGTGCCGCGACCCCAACCCAGCCCTGGGTAGCCTGCAGCATGGCCAGCTGTTCTCTGCC
.: ::::: :: : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
M  -GTTCTTC-----CATC-----AGTG---TGCAGAATGATACCACTGCTTCTGTCC
130     140     150     160     170

200     210     220     230     240     250     260
H  CTGCTGGCAGCCCTGGTCCTGGCCAGGCTCCTGCAGCTTTAGCAGATGTTCTGGAAGGAGACAGCTCAG
.: ::::: :: : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
M  CTGCTGGCCGCTCTGGTCTGACCCAAAGCCCTGCCGCCCTCGCTGATGACCTGAAAGAAGACAGCTCGG
180     190     200     210     220     230     240

270     280     290     300     310     320     330
H  AGGACCGCGCTTTTCGCGTGCGCATCGGGGCGACGCGCCACTGCAGGGCGTGTCTCGCGCGGCCCTCAC
.: ::: : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
M  AGGATCGAGCCCTCCGCGTGCGCATCG-GTGC--CGCGCAGCTGCGGGGCGTGTGGGCGGTGCCCTGGC
250     260     270     280     290     300

```

Fig. 7L

H GACGCTGTGGAGGTCAAGTCAAAGGGTGTCTTTCTCTACCGAGAGGGCTCTGCCCCGCTATGCTTTCT
 :: ::
 M GATGCTGTGGAGGTCAAGTCAAAGGGTGTCTTCCCTCTACAGAGAGGGCTCTGCGCGCTATGCTTTCT
 590 600 610 620 630 640 650 660 670 680

Fig. 7M

```

690      700      710      720      730      740      750
H CCTTTTCTGGGGCCACGAGGCTGTGCCCGCATTGGAGCCACATCGCCACCCGGAGCAGCTCTATGC
   ::::: ::::: ::::: ::::: ::::: ::::: ::::: ::::: ::::: ::::: :::::
M CCTTCGCTGGAGCCCAAGGAGCCTGCGCTCGCATAGGAGCCCGAATCGCCACCCGGAGCAGCTCTATGC
660      670      680      690      700      710      720

760      770      780      790      800      810      820
H CGCCTACCTTGGGGCTATGAGCAATGTGATGCTGGCTGGCTCGGATCAGACCGTGAGGTATCCCATC
   ::::: ::::: ::::: ::::: ::::: ::::: ::::: ::::: ::::: :::::
M TGCCTACCTCGGCGGCTATGAGCAGTGTGATGCAGGCTGGCTGTCCGACCAAACTGTGAGGTACCCCATC
730      740      750      760      770      780      790

830      840      850      860      870      880      890
H CAGACCCACGAGAGGCCTGTTACGGAGACATGGATGGCTTCCCCGGGTCCGGAACATATGGTGTGGTGG
   ::::: ::::: ::::: ::::: ::::: ::::: ::::: ::::: ::::: :::::
M CAGAAACCCACGAGAGGCCTGCTCTGGAGACATGGATGGCTATCCTGGCGTGCAGAACTACGGAGTGGTGG
800      810      820      830      840      850      860

900      910      920      930      940      950      960
H ACCCGGATGACCTCTATGATGTGTACTGTATGCTGAAGACCTAAATGGAGAACTGTTCTCTGGGTGACCC
   . ::::: ::::: ::::: ::::: ::::: ::::: ::::: ::::: ::::: :::::
M GTCCCTGATGATCTCTATGATGTCTACTGTATGCCGAAGACCTAAATGGAGAACTGTTCTCTAGCGCCCC
870      880      890      900      910      920      930

970      980      990      1000      1010      1020      1030
H TCCAGAGAAGCTGACATTTGGAGGAAGCACGGCGTACTGCCAGGAGCGGGGTGCAGAGATTGCCACCCACG
   ::::: ::::: ::::: ::::: ::::: ::::: ::::: ::::: ::::: :::::
M TCCCAGCAAGCTGACATGGGAGGAGGCTCGGGACTACTGTCTGGAACGTGGTGCACAGATCGCTAGCACACA
940      950      960      970      980      990      1000

```

Fig. 7N

```

1040      1050      1060      1070      1080      1090      1100
H  GGCCAACTGTATGCAGCCTGGGATGGTGGCCTGGACCACTGCAGCCAGGGTGGCTAGCTGATGGCAGTG
      :::::::::::::::::::::::::::  :::::::::::::::::::::::::::  :
M  GGCCAGCTGTACGCAGCCTGGAATGTGTGGCCTGGACAGATGTAGCCCTGGCTGGCTGGCTGATGGCAGCG
1010      1020      1030      1040      1050      1060      1070

1110      1120      1130      1140      1150      1160      1170
H  TGGCGTACCCCATCGTCACACCCAGCCAGCGCTGTGGTGGGGGCTTGCCCTGGTGTCAAGACTCTCTTCCT
      :::::::::::::::::::::::::::  :::::::::::::::::::::::::::  :
M  TGGCGTATCCCATCATCACACCCAGCCAAAGCTGTGGGGGGCGGCTGCCAGGAGTCAAGACCCCTCTTCCT
1080      1090      1100      1110      1120      1130      1140

1180      1190      1200      1210      1220      1230      1240
H  CTTCCCCAACCAAGACTGGCTTCCCCCAATAAGCACAGCCGCTTCAACGTCTACTGCTTCCGAGACTCGGCC
      :::::::::::::::::::::::::::  :::::::::::::::::::::::::::  :
M  CTTTCCCCAACCAAGACTGGCTTCCCCCAGCAAGCAAGCAACCGCTTCAATGTCTACTGCTTCCGAGACTCTGCC
1150      1160      1170      1180      1190      1200      1210

1250      1260      1270      1280      1290      1300      1310
H  CAGCCTTCTGCCATCCCTGAGGCCCTCCAAACCCAGCCTCCAACCCAGCCTCTGTGACTAGAGGCTATCG
      :::::::::::  :  ::::::::::::::  ::::::::::::::  ::::::::::::::  :
M  CATCCCTCTGCTTCCTCTGAGGCCCTCTAGCCCAAGCCTC-----AGATGGACTTGAGGCCCATTG
1220      1230      1240      1250      1260      1270

1320      1330      1340      1350      1360      1370      1380
H  TCACAGTGACAGAGACCCCTGGAGGAACTGCAGCTGCCTCAGGAAGCCACAGAGAGTGAATCCCGTGGGGC
      ::::::::::::::  ::::::::::::::  ::::::::::::::  ::::::::::::::  :
M  TCACAGTGACAGAAAAGCTGGAGGAACTGCAGCTGCCTCAGGAAGCGATGGAGAGCGAGTCTCGTGGGGC
1280      1290      1300      1310      1320      1330      1340

```

Fig. 70

```

1670      1680      1690      1700      1710      1720
H  GAGCCAGCAGCCAGGAGAGTCACTCTCCAGG-----CGCCAGCAAGGCAGTCTTGCAGCCTGGTG
..  ::  ::  ::  ::  ::  ::  ::  ::  ::  ::  ::  ::  ::  ::  ::  ::  ::  ::  ::  ::
M  GGCTCAGAAAC---AGAGCATTCACCTCTCCAGGTGTCCCCACCAGCCAGGCAGTTCTACAGCTGGATG
1600      1610      1620      1630      1640      1650      1660

```

Fig. 7P

	2010	2020	2030	2040	2050	2060	2070
H	CTCTGAAGATAATTCTGGAAGAACTGCCCCAGCAGGGACCTCAGTGCAGGCCCAGCCAGTCTGCTGCCCACT						
	::::::::: :: :::::::::::::: :: ::::: :::::::::::::::::::: :::::::::::::::::::: ::::::::::::::::::::						
M	CTCAGAAAGAGAAGTCTGGAAGAACTGTCTCTGGCAGGCACCTCAGTGCAGGCCCAGCCAGTCTGCTGCCCACT						
	1910	1920	1930	1940	1950	1960	1970

Fig. 7Q

```

2080      2090      2100      2110      2120      2130
H  GACAGCGCCAGCGAGGTGGAGTGGCCCGTGGTCCCGCATCAGTAATT-----CTGCCCAAGGCTCA
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
M  GACAGTGGCAGCCACGGTGGAGTGGCTGTGGCTCCCTCATCAGGTGACTGTATCCCGAGCCCTGCCACA
1980      1990      2000      2010      2020      2030      2040
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :

H  A-----C-TGC-----CCTCT--CTAT-----CCTA-CT-----CCT
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
M  ATGGTGGACATGCTTGGAGGAGAAGAGGGTTTCCGCTGCCTATGTTGCCAGGCTATGGGGGGGACCT
2050      2060      2070      2080      2090      2100      2110
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :

2160      2170      2180      2190      2200
H  TTTC-----TTCCC--C-----CTGCAGCTCTGG-----GTC--ACCTGA--CCTG----TAGTCCCTTT
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
M  GTGCGATGTTGGCCTTCATTTCGCAGCCCTGGCTGGGAGGCCTTCCAGGGAGCCTGCTACAAGCACCTTT
2120      2130      2140      2150      2160      2170      2180
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :

H  AACCCAC-----CA-----TCA-TCCCAAACCTCT-----C-----CTGTCC-----TTT
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
M  TCCACACGAAGGAGTTGGGAGGAGCAGAAAGTCAGTGCCGAGCGCTAGGTGCTCATCTGACCCAGCATCT
2190      2200      2210      2220      2230      2240      2250
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :

H  GC-----CT-----TCATTCTCT-TACCC---ACC---TCTACCTATGGT-----CTC-----
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
M  GCACCCCTGAGGAGCAAGACTTTGTCAATGATCGATACCGGAGTACCAGTGATGGGCTCAATGACAG
2260      2270      2280      2290      2300      2310      2320
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :

```

Fig. 7R

```

2280      2290      2300      2310      2320
H  --CAATCTCGGATATCCAC-----CTTGTGG-GTATCTCAGCTCTCCGGT-CTT-TACCCCTGTG-AT
:  ::  :::::  ::  :::::  ::  :::::  ::  :::::  ::  :::::  ::  :::::  ::  :::::  ::
M  GACCATCGAGGGTGACTTCTTGTGGTCAGATGGTGGCCCTCTGCTCTATGAAAACTGGAACCCCTGGGCAG
2330      2340      2350      2360      2370      2380      2390

2330      2340
H  CC---CAGC-----CCCGCC-----ACTG-----ACCA---TCTGTGA----
:  ::::  ::  ::  :::::  ::  :::::  ::  :::::  ::  :::::  ::  :::::  ::  :::::  ::
M  CCTGACAGCTACTTCTGTCTGCGGAGAACTGTGTGGTCATGGTGTGGCATGACCAGGGACAGTGGAGTG
2400      2410      2420      2430      2440      2450      2460

2360      2370      2380      2390
H  ----CCCTTCC-CTGCCATTGGGCC--CTCCA-----CCTGTGG--CTCACATCTC
:  ::::  ::  :::::  ::  :::::  ::  :::::  ::  :::::  ::  :::::  ::  :::::  ::
M  ATGTGCCCTGCAACTACCATCTATCTCTACACCTGCAAGATGGGGCTTGTGTCTGTGGGCTC-CACCAC
2470      2480      2490      2500      2510      2520      2530

2400      2410      2420      2430      2440      2450
H  GCCAGCCCCA----CA-----GAGCATCTCAG----GCCCTCCAAGGTCTCTCATCACCTATTGCA
.  :::::  ::  ::  :::::  ::  :::::  ::  :::::  ::  :::::  ::  :::::  ::  :::::  ::
M  AGCTACCCCTGGCTCAATAATTGGTCGCCCTCGGCTGCGCTACGCGGTGGATACCTGTCTCGATATCG
2540      2550      2560      2570      2580      2590      2600

2460      2470      2480
H  --GCCCTT--CAGG---GCTCGGC-----CTATTTCCACTAC-----TCC
:  ::  ::  :::::  ::  :::::  ::  :::::  ::  :::::  ::  :::::  ::  :::::  ::
M  ATGCCGAGACGGGCTGGCTCAGCGCAACCTGCGGTTGATCCGCTGCCAGGAGAAATGGGCTTTGGGAGGCC
2610      2620      2630      2640      2650      2660      2670

```

Fig. 7S

```

2490      2500      2510      2520      2530
H CTTCA-TCCGCCCTGTGTGCC-----GTCC---CCTTAGCTGC-CTCCT-----ATTGATCTC
: : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
M CCTCAGATTTCCTGTGTACCCCGGAGGCCCTGGCCGTGCTCTGCGCTCCATGGACGCCCCAGAGGACCAC
2680      2690      2700      2710      2720      2730      2740

2540      2550      2560      2570      2580
H AGGGA-AGC-----CTGGGAGTC-CC-TTCTCACC--CCTC-AACCTCCGGAGT-CCAGGAGAAC
: : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
M GGGACAGCTCTCGAGGCACAGGAAGGCACCGTTGACACCGCCCTCCAGTCTCTAGGGAGCCTGGAAGAC
2750      2760      2770      2780      2790      2800      2810

2590      2600      2610      2620      2630
H CCGTACCCCCA-CAGAGCCTTAA-GCAACTACT-----TCT-----GTGAAGTATTT
: : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
M TGCTGCCCCCAGCAGGACCCCTCTCACATCAACTGCCAGTGCTCTTCCCCTATGATAGGGGTGACGTGAGA
2820      2830      2840      2850      2860      2870      2880

2640      2650
H ----TTTGACTGT--TTCA-----TGGAACA-----
: : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
M GGGTGGGACTGAAATTTCAGAGGACAGCGCTCGAAGGGTTTCTTGGGAAACACTTGGGTGGCTCCGCCCC
2890      2900      2910      2920      2930      2940      2950

2660      2670      2680
H -----AGCCTTGAAAT-----AAATCTCTATTAA-----AC
: : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
M CTCACACAAGGGCCTCAGGTTTACCCGGTAAGTCCCTAAGTGCCTCAACTGCCCTCTCATGTCTCAGCTGC
2960      2970      2980      2990      3000      3010      3020

```

Fig. 7T

```

      2690                                2700
H  CGCTTTGT-----AAC-----CAAAAAAAAAAAAAAA
   : : : : :
M  CTCCTTGTCCCTCGATNTCGTNAGGGGACACTGTGCTATTTCGATCTTGATTGTCGAAGAGTTTTTAGGAT
   3030 3040 3050 3060 3070 3080 3090
      2710                                2730
H  AAA-----AAAAAAAGGGCGG--CC-----GC
   : : : : :
M  GGAGTACCAGCAAAACCAGGTGGAAATAAAGTTGTCTGAACCCCAAGAAAAAA
   3100 3110 3120 3130 3140 3150
```

Fig. 7U